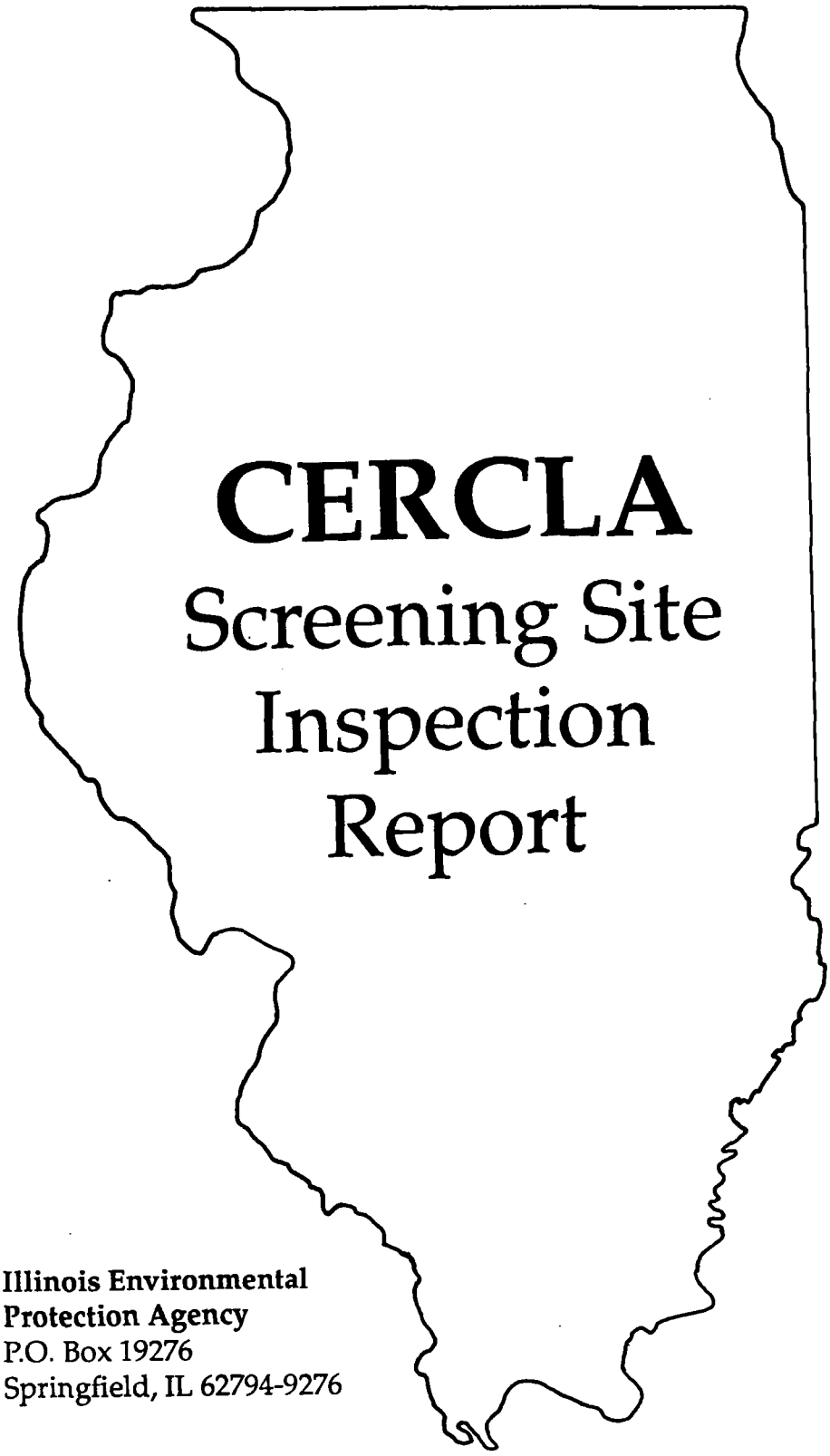
L1190500002--Madison Co.
Clark Oil & Refining Corp.
ILD041889023
Superfund HRS



CERCLA
Screening Site Inspection Report

Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

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I. INTRODUCTION

On December 11, 1990, the Illinois Environmental Protection Agency's Pre-Remedial Unit was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a CERCLA Screening Site Inspection (SSI) of the Clark Oil and Refining Corporation/Wood River Refinery, Hartford, Illinois.

The site was initially placed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) by the U.S. EPA in August of 1980. This action was taken as a result of the concern over possible groundwater and surface water contamination due to operations at the facility.

An initial CERCLA evaluation, in the form of a Preliminary Assessment, was completed by Kenneth L. Page of the IEPA in January of 1986. IEPA's Pre-Remedial Unit prepared an SSI workplan for Clark Oil and Refining that was approved by the U.S. EPA's Region V office in December of 1990. The sampling portion of the Screening Site Inspection was conducted on December 11 and 12, 1990 when the sampling team collected a total of six groundwater and twelve soil samples.

The purpose of a Screening Site Inspection have been stated by the U.S. EPA in a directive that states:

> All sites will receive a screening SI to 1) collect

> additional data beyond the PA to enable a more refined preliminary HRS (Hazard Ranking System) score, 2) establish priorities among sites most likely to qualify for the NPL (National Priorities List), and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQO's). Based on the Preliminary refined HRS score and other technical judgement factors, the site will either be designated as NFRAP (No Further Remedial Action Planned), or carried forward as an NPL listing candidate. A Listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority, such as RCRA [Resource Conservation and Recovery Act]... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQO's. It may also provide needed data in a format to support remedial investigation workplan development. Only sites that appear to score high enough for listing and have not been deferred by another authority will receive a listing SI (U.S. EPA 1988).

U.S.EPA Region V has also instructed IEPA to identify sites during the SSI that may require removal action to remediate an immediate human health and/or environmental threat.

2. SITE BACKGROUND

2.1 Introduction

This section contains a summary of information gathered from the Preliminary Assessment, Illinois Environmental Protection Agency (IEPA) files, and discussions with site representatives.

2.2 Site Description

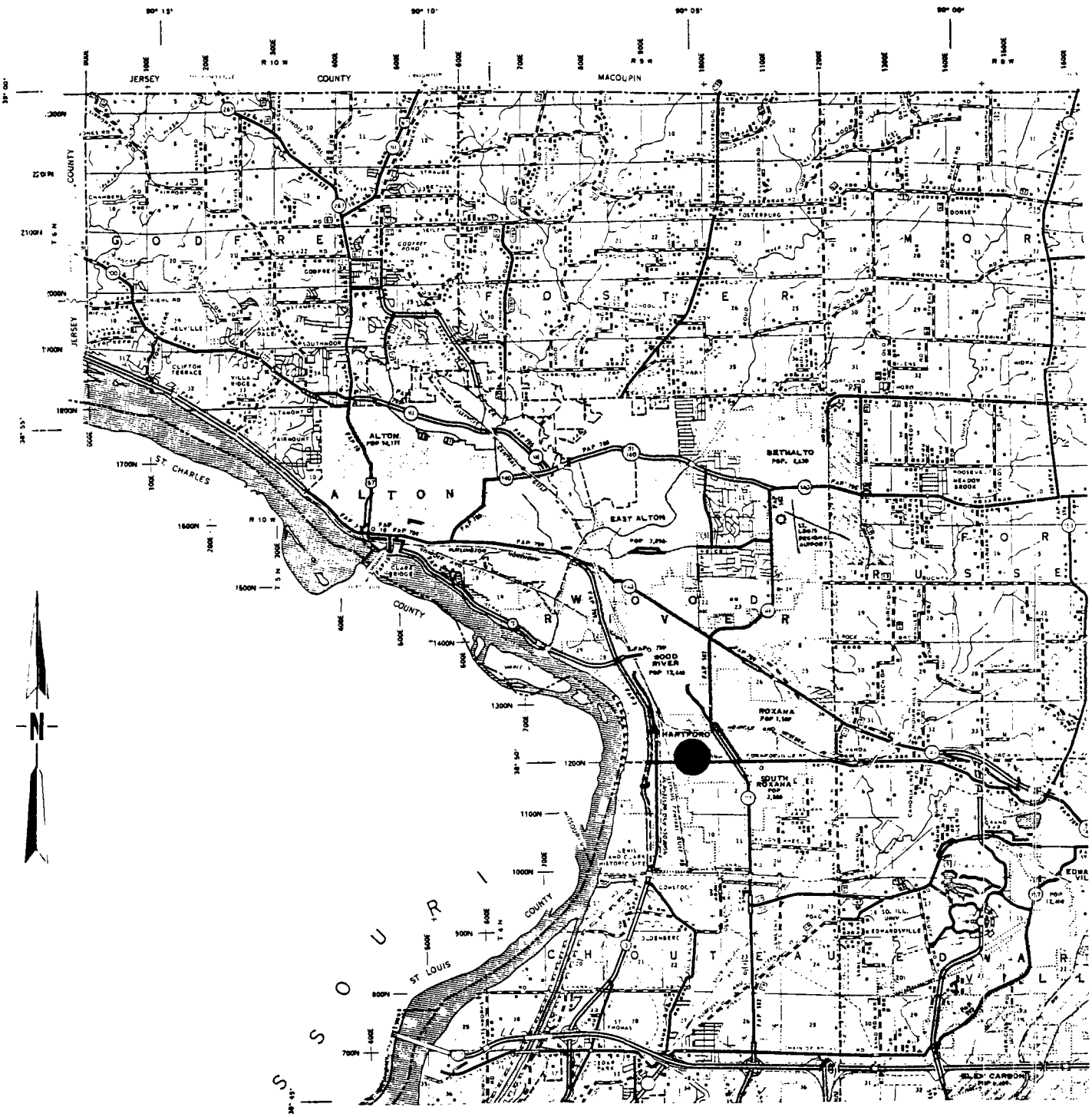
The Clark Oil and Refining Corporation, Wood River Refinery is located in the Village of Hartford, Madison County, Illinois (Figures 2-1, 2-2 and 2-3). The refinery operations occupy approximately 253 acres located in the following sections: Sections 34 and 35, Township 5 North, Range 9 West; and Section 3, Township 4 North, Range 9 West. Clark Oil property also includes approximately 142 acres located in Section 33, Township 5 North, Range 9 West; and Section 4, Township 4 North, Range 9 West (See map located in Appendix C for features and property boundaries). A 4-mile radius map of the area surrounding the Clark Oil facility and a 15-mile surface water map can be found in Appendices A and B respectively.

Clark Oil and Refining/Wood River Refinery is an operating petroleum refinery with an approximate plant capacity of 60,000 barrels a day. Process operations include crude desalting, atmospheric crude distillation, fluid catalytic

● SITE LOCATION

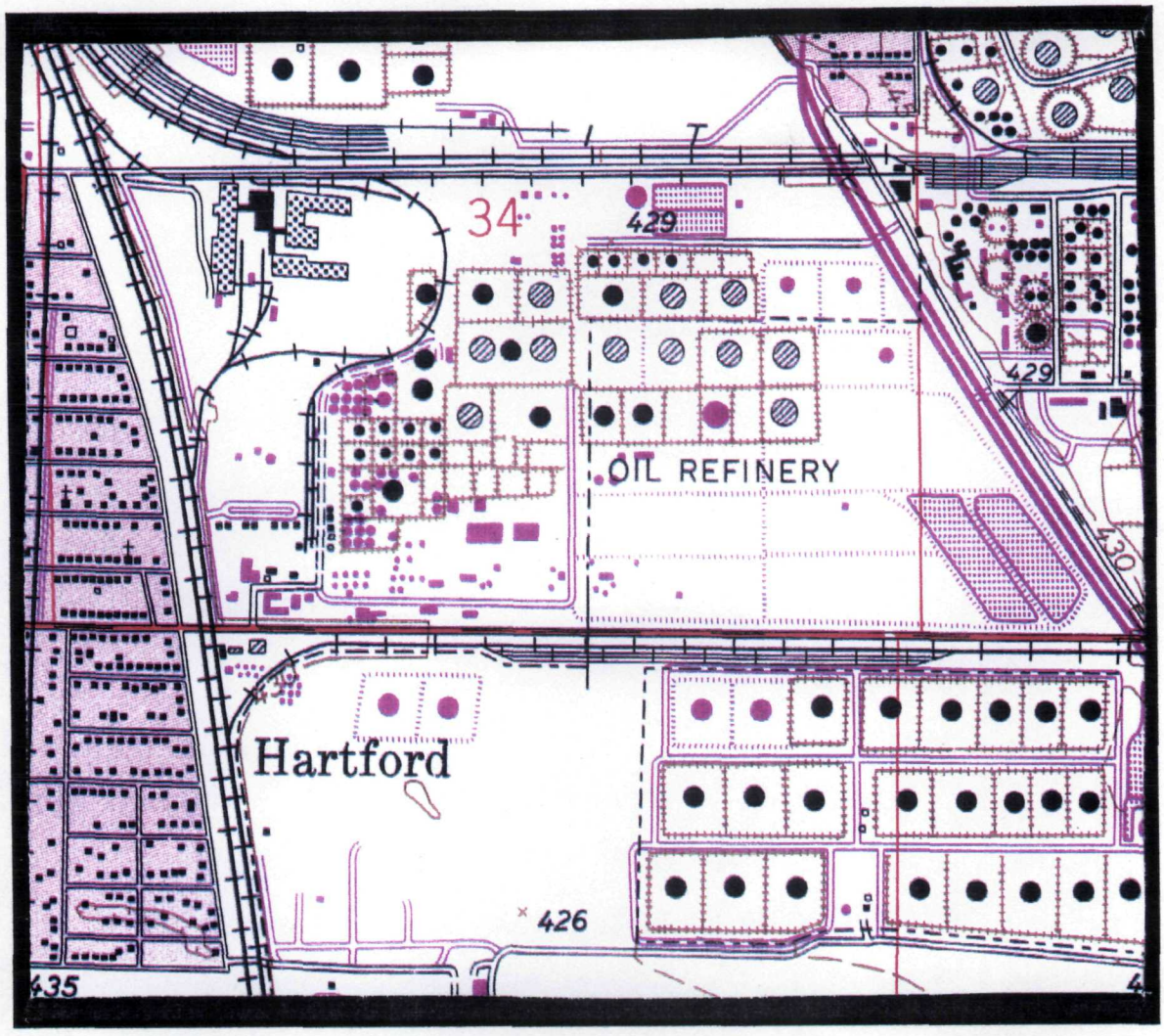
FIGURE 2-1

SITE LOCATION MAP



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	SITE NAME: Clark Oil & Refining Corp. SITE ILD#: ILD041889023
REGIONAL AREA MAP	
Legend: ● Site Location Scale	

FIGURE 2-2



Source: IEPA, 1992. Base Map: U.S.G.S. Topographic Map, 1974.

Approximate Scale: 1"= 2000'

Figure 2-3

SITE TOPOGRAPHY

cracking, hydrofluoric acid alkylation, vacuum distillation, hydroprocessing, and catalytic reforming. Products include gasoline (leaded gasoline production has been discontinued), LPG (liquid propane gas), distillate fuels, and coke. Wastewater generated in the plant passes through various unit oil traps before combining at a master trap and going to an API oil-water separator. Flow then passes through a Dissolved Air Flotation (DAF) tank before entering a single stage extended aeration/nitrification activated sludge system. Effluent is then polished in dual media filters before being discharged into the Mississippi River via IEPA NPDES (National Pollutant Discharge Elimination System) permit #IL0001244.

The following wastestreams are generated as a result of the refinery's processes: DAF Float, Slop Oil Emulsions, Heat Exchanger Bundle Cleaning Sludge, and API Separator Sludge. Heat Exchanger Bundle Cleaning Sludge is processed through the wastewater treatment system described above. DAF Float, Slop Oil Emulsions, and API Separator Sludge are piped to above ground tanks. These wastes are then piped to a coking unit where they are processed into petroleum coke, coker gasoline, coker naphtha, coke fines, and gasoline oils. All of these materials are sold as products by Clark. Two other wastes are generated during routine turnaround periods: spent catalyst and wastewater treatment sludge. These wastes are

categorized as non-hazardous. The spent catalyst is shipped to GSX-Barton (SW Permit #841332) and the waste water treatment sludge is shipped to the Peoria Disposal Company (SW Permit #941676).

An unlined lagoon serving as a stormwater retention basin is located at the intersection of Illinois Route 111 and Edwardsville Road. The basin (approximately 125,000 square feet) receives all site surface runoff and was exhibiting visual signs of hydrocarbon contamination during the October 30, 1990 reconnaissance inspection and the December 11-12, 1990 screening site inspection. An unlined pit containing crude oil tank bottoms is also present on the refinery property.

The refinery operation is bounded on the west by residential properties, on the south by agricultural and industrial property, on the east and north by industrial property (Shell Oil Refinery).

According to the IEPA Office of Chemical Safety and IEPA Technical Compliance files, a documented hydrocarbon plume is present on the groundwater in the City of Hartford and in the vicinity of Shell Oil and Clark Oil properties.

2.3 Site History

Clark Oil and Refining, Wood River Refinery began operations

in 1941 as the Wood River Refinery. The facility became part of the Sinclair Oil Corporation in July, 1950. The refinery was purchased by Clark in September of 1960, sold to APEX in September of 1983, and repurchased by Clark on November of 1989.

The facility does not currently produce leaded gasoline and all leaded gasoline has been removed. Tetraethyl lead (TEL) was the anti-knock compound used by Clark in the production of leaded gasoline. All TEL has been removed, but the bulk storage area is still present, and according to Clark representative Richard Thomas, is currently awaiting contractor removal. Waste generated by the facility containing lead was handled as Leaded Tank Bottoms, and was shipped to an unknown location for off-site disposal. The last documented shipment of Leaded Tank Bottoms was in April, 1988.

Prior to the construction of the current wastewater treatment system, all wastewater passed through various oil traps and a filter system. The effluent was then piped to a 3-stage lagoon system located just west of the levee and north of Hawthorne Street (see Appendix B). The effluent, after passing through the lagoons, was discharged to the Mississippi River.

Clark Oil property west of the levee and south of Hawthorn

Street was the site of an illegal dump according to IEPA FOS files. In 1976, an asbestos-like substance and an unidentified sludge-like material was observed at this site.

The DAF Float, Slop Oil Emulsions, and API Separator Sludge wastestreams, reused to produce petroleum coke, were pumped to Tank 10-2 for temporary storage (see facility map located in Appendix C). Tank 10-2 had been in use for approximately 48 years and had been documented by IEPA's Collinsville Field Operations Section in Collinsville personnel lacking adequate secondary containment and exhibiting visual contamination within the earthen berm surrounding the tank. Tank 10-2 underwent closure activities in June, 1989. A total of 297 tons of sludge from tank cleanout and removal and 409 tons of waste/soil from within the earthen berm were fixed and shipped by Chemical Waste Management to their Emelle, Alabama, landfill. The remaining soil inside the berm was then treated with microbes.

2.4 APPLICABILITY OF OTHER STATUTES

This section discusses the applicability of any other Environmental statutes with regards to Clark Oil and Refining.

The Clark Oil facility is considered to be a "full quantity" generator under the Resource Conservation and Recovery Act (RCRA) program according to the Federal listing of RCRA

related facilities published by the Region V offices. However, Clark Oil does not hold a permit from the IEPA. Clark filed a "Raw Materials Storage" RCRA part A permit application on November 17, 1980, which Clark then withdrew on November 23, 1982. The withdrawal of the application was approved by the U.S. EPA on December 15, 1983.

With the exception of the DAF Float, Slop Oil Emulsions, Heat Exchanger Bundle Sludge, and API Separator Sludge, products at Clark are exempt from CERCLA due to the Petroleum Exclusion. The groundwater contamination problems in the Hartford area also fall under the Petroleum Exclusion.

3. SITE INSPECTION ACTIVITIES AND ANALYTICAL RESULTS

3.1 Introduction

This section outlines procedures utilized and observations made during the CERCLA Screening Site Inspection conducted at the Clark Oil/Wood River Refinery on December 11 and 12, 1990. Specific portions of this section contain information pertaining to the reconnaissance inspection and sampling procedures. This section also details the analytical results with particular emphasis upon the Key samples.

The Screening Site Inspection for Clark Oil/Wood River Refinery was conducted in accordance with the site inspection workplan which was developed and submitted to the U.S. EPA Region V offices prior to the initiation of sampling activities.

3.2 Reconnaissance Inspection

IEPA personnel conducted a reconnaissance inspection of the Clark Oil and Refining Corporation and the surrounding area on October 30, 1990. The inspection included a walk-through of the refinery operations area and the lagoon area west of the levee to identify potential sampling locations and appropriate health and safety requirements. Mr. Richard Thomas and Mr. Joe Bean accompanied IEPA personnel on the inspection and were able to answer the questions.

Several observations were made by Agency personnel during this visit.

The refinery operations area is enclosed by a chainlink fence with full-time security personnel present at entrance points. The facility is bounded to the west by the Village of Hartford, the north and east by Shell Oil Company, the south by Shell Oil property and agricultural land.

The lagoon area west of the levee does not have restricted access, and Mr. Thomas stated that people have been seen fishing there from time to time. The southwest portion of this area is bounded by NICOR National Shipyard and lagoons, the west by the Mississippi River, the north by Shell Oil property, and the east by the levee and Illinois Rt. 3. Clark Oil also operates a barge loading pipeline transfer station at the west edge of this property on the banks of the river.

3.3 Site Representative Interview

The site representative interview was conducted on October 30, 1990, between Mr. Todd Buchanan of the IEPA and Mr. Joe Bean of Clark Oil and Refining Corporation. The meeting was arranged to explain the Pre-remedial process to the Clark representatives and to confirm the SSI schedule and objectives. During this interview Mr. Buchanan indicated that the inspection would include the collection of ten on-site and two off-site soil/sediment samples and three on-site and

three off-site groundwater samples. Mr. Thomas stated that the company wished to split samples at this time.

3.4 Soil/Sediment Sampling

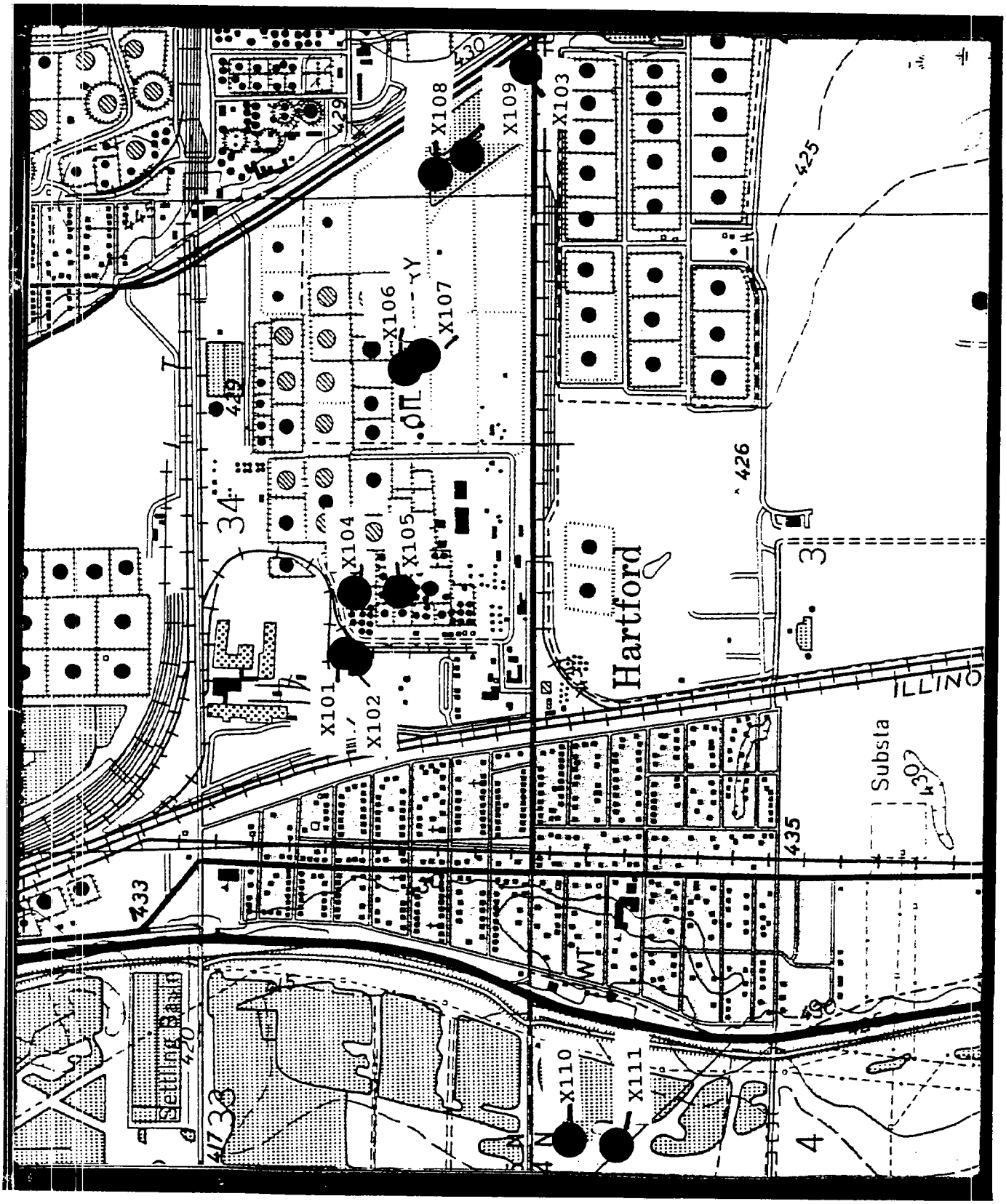
A total of twelve soil/sediment samples were collected during the SSI at Clark Oil (See Figures 3-1 and 3-2 for soil/sediment sampling locations). All samples were collected using stainless steel spoons and hand augers with the soil/sediment being transferred directly to the sample jars and packed in accordance with the U.S. EPA required procedures. Table 3-1 outlines the sampling activity.

Table 3-1

Soil/Sediment Sampling

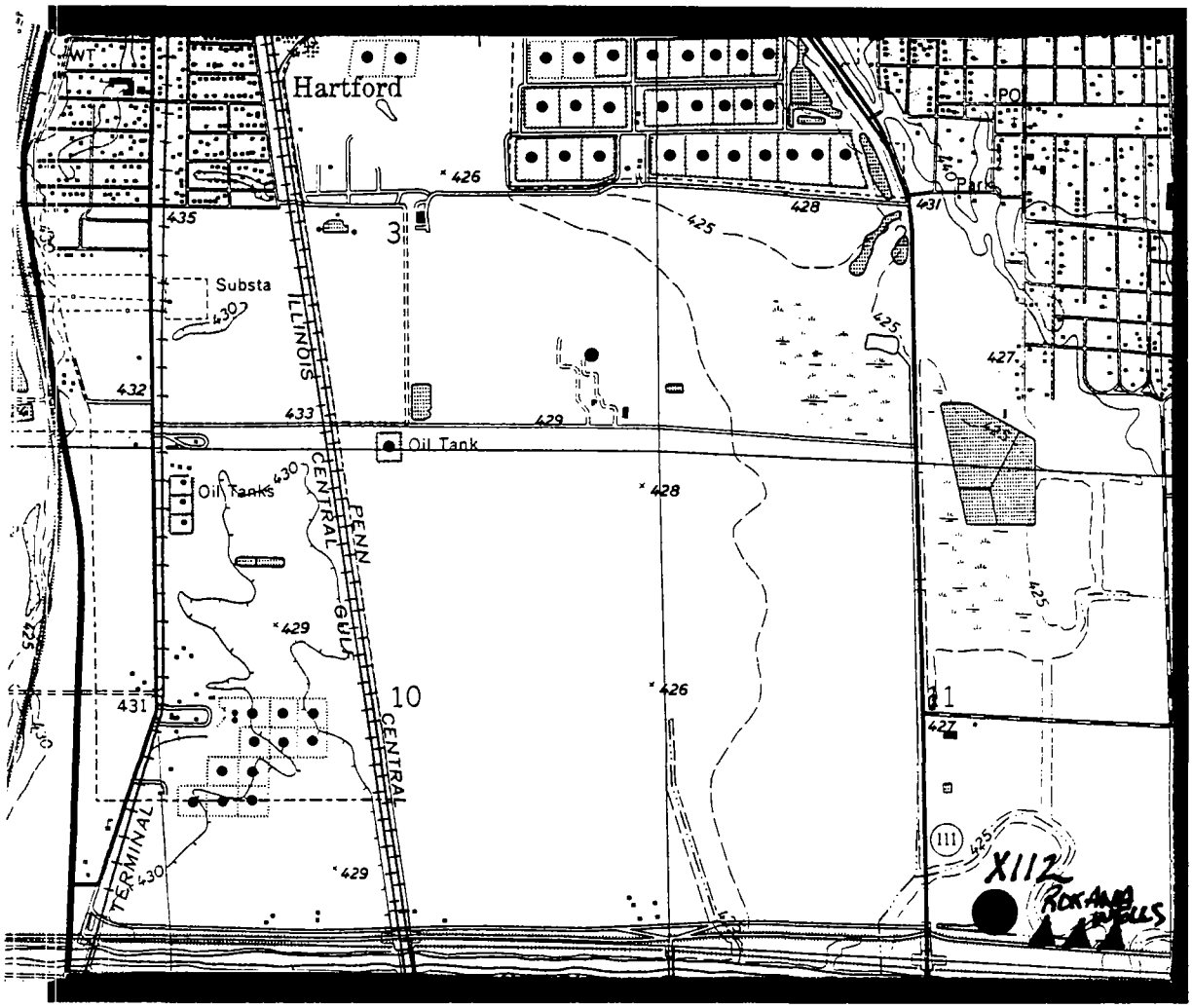
Soil/Sediment samples collected on December 11, 1990:

Time	Depth	Location
X101		
8:45a	2-3'	N side of TEL storage building, 72.4' S of S corner post of the RR gate and 149' from corner post of site boundary fence.
X102		
9:15a	1-1.5'	SE of TEL bldg., 72.8' W of foam valve and 66.6' NW of RR switch.
X104		
9:55a	0-6"	Inside berm of leaded tanks 35-1 and 35-2, 26.8" SE of tank 35-2 manhole and 48.9' S of tank mixer.
X105		
10:20a	0-6"	NW corner of bermed area former site of tank 10-2.



Source: IEPA, 1992. Base Map: U.S.G.S. Topographic Map, 1974
Approximate Scale: 1"= 1123'

Figure 3-1
SOIL/SEDIMENT SAMPLING LOCATIONS



Source: IEPA, 1992. Base Map: U.S.G.S. Topographic Map, 1974.

Approximate Scale: 1"= 2000'

Figure 3-2
BACKGROUND SOIL SAMPLE

Soil/Sediment samples taken on December 12, 1990:

X103		
2:55p	0-6"	Offsite roadside drainage ditch near junction of Rt. 111 and 11A, 9.8' S of SE site corner post.
X106		
10:25a.	0-6"	8' from SE corner of berm, tank bottoms pit.
X107		
10:50a.	3-3.5'	Along west bank, 40' N of SW corner of tank bottoms pit.
X108		
12:20p	1.5-2'	N bank near inlet pipe of storm water retention basin. 74.5' E of NE corner of concrete skimmer base and 62.5' SW of nearby fire hydrant.
X109		
12:45p	2'	NW point of E bank of retention basin, 8' from bank.
X110		
1:45p	2-2.5'	NE corner of 1st stage lagoon near abandoned effluent discharge pipe 86' SW of SW corner of power line tower 108' W of orange gas line marker.
X111		
2:20p	1'	W of pond S of Hawthorn Street, site of former illegal dump, 139' SW of SW corner of power line tower.
X112		
8:40a	6"	Base of levee, N slope, approx. 300 yds. E of Rt. 111 near Roxana water plant.

Standard IEPA decontamination procedures were followed prior tothe collection of all samples. The procedures included the scrubbing of all equipment (spoons, pans, etc.) with a non-foaming Trisodium Phosphate solution, rinsing with hot tap water, rinsing with acetone, rinsing with hot tap water

again, and final rinsed with distilled water. All equipment was air dried, then wrapped and stored in heavy-duty aluminum foil for transport to the field. Field decontamination procedures included all of the above except the hot tap water rinse.

3.5 Groundwater Sampling

Three on-site monitoring wells and three off-site public wells were sampled to determine if compounds found on the Target Compound List (TCL) have been released to groundwater (See Figure 3-2 for sampling locations). The monitor wells had 3 well volumes purged, with pH, conductivity and temperature measured. Each well was hand sampled with a Teflon bailer using nylon cord and was field filtered for total metals with a Masterflex variable speed peristaltic pump and filter stand with filters. Directly after sampling each point, preservatives were added to appropriate bottles and were packed according to U.S.EPA required procedures.

The three public wells sampled (Identified in Figure 3-2, as G501, G502, and G503) were pumped for a minimum of fifteen minutes prior to sampling with pH, conductivity, and temperature readings taken. The well samples were taken at the respective well heads prior to any treatment or filtering and were field filtered for heavy metals. The following table outlines groundwater sampling activities:

Table 3-2

Groundwater Sampling

Groundwater samples collected on December 11, 1990:

G101

Time	Depth	
11:25a	50.5'	NW part of refinery area near TEL storage building (monitor well).

G104

3:35p	100'	SE of cooling tower #2 (monitor well).

G501

4:45p	107'	Hartford PW #3.

G502

5:05p	106'	Hartford PW #4.

Groundwater Samples collected on 12-12-90:

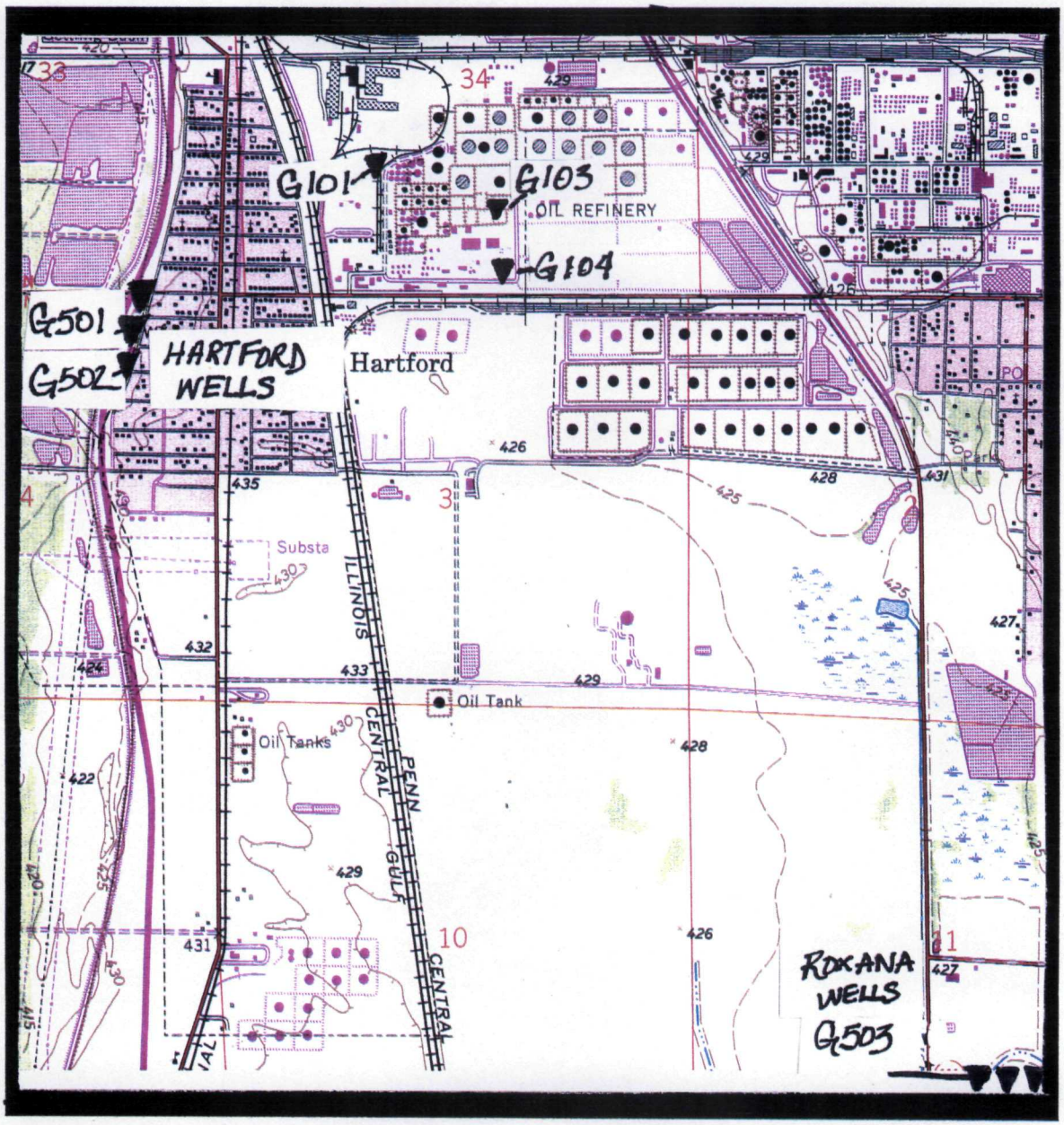
G103

11:30a	97.2'	3' E of valve tower and 4' S of cover of process well #3.

G503

8:45a	110'	Roxana PW #8.

Standard IEPA decontamination procedures were followed prior to the collection of all samples. The procedures included the scrubbing of all equipment (bailers, buckets, etc.) with a non-foaming Trisodium Phosphate solution, rinsing with hot tap water, rinsing with acetone, rinsing with hot tap water again, and final rinsed with distilled water. Alll equipment was air dried, then wrapped and stored in heavy-duty aluminum foil for transport to the field. Field decontamination procedures included all of the above except the hot tap water rinse.



Source: IEPA, 1992. Base Map: U.S.G.S. Topographic Map, 1974.

Approximate Scale: 1"= 1992'

Figure 3-3

GROUNDWATER SAMPLING LOCATIONS

3.6 Analytical Results

Chemical analysis of the twelve soil/sediment samples collected during the inspection revealed the presence of the following substances: volatiles, semi-volatiles, pesticides, metals, suspected laboratory artifacts, and common inorganic soil constituents (See Figure 3-1 for sampling locations). Chemical analysis of the six groundwater samples also showed the presence of volatiles, semi-volatiles, pesticides, metals, laboratory artifacts, and common inorganic groundwater constituents (See Table 3-2 for sampling locations). Table 3-3 provides a summary of results. Complete results can be found in Volume II of this report.

3.7 Key Samples

Tables 3-4 and 3-5 identify those samples taken during the CERCLA Screening Site Inspection (SSI) which were shown to contain contaminants at levels which were significantly higher than those of background concentrations.

For a review of all contaminants detected in samples taken during the CERCLA SSI, the reader is referred to the Sample Summary Table located in the front of Volume II of this report.

Clark Oil & Refining Corp.- Key Samples
ILD 41889023

TABLE 4-1
SUMMARY

SAMPLING POINT	X101	X102	X103	X104	X105	X106	X107	X108	X109	X110	X111	X112
PARAMETER	12-11-90	12-11-90	12-12-90	12-11-90	12-11-90	12-12-90	12-12-90	12-12-90	12-12-90	12-12-90	12-12-90	12-12-90
VOLATILES	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Acetone	24.0	--	--	--	--	--	1300.0 J	54.0	--	--	--	14.0 U
Toluene	--	--	--	55000.0	--	--	770.0 J	--	7700.0 J	--	1500.0	7.0 U
Ethylbenzene		1100.0 J	--	35000.0	--	--	1100.0 J	--	--	--	1900.0	7.0 U
Xylene(total)	--	1500.0	--	--	--	--	6500.0 J	--	21000.0	--	12000.0	7.0 U
SEMIVOLATILES	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Naphthalene	--	--	--	450000.0	--	--	--	--	36000.0 J	--	--	1800.0 U
2-Methylnaphthalene	350.0 J	4400.0 J	--	690000.0	--	32000.0 J	--	--	160000.0	--	--	1800.0 U
Fluorene	--	--	--	5700.0	--	--	--	--	30000.0 J	--	46000.0 J	1800.0 U
Phenanthrene	--	--	--	59000.0 J	--	--	--	--	110000.0	--	220000.0	1800.0 U
Pyrene	--	--	--	9000.0	700.0 J	14000.0	--	--	100000.0	--	320000.0	1800.0 U
Benzo(a)anthracene	--	--	--	--	560.0 J	100000.0	--	--	56000.0 J	--	140000.0	1800.0 U
Chrysene	--	--	--	--	--	50000.0 J	--	--	25000.0 J	--	25000.0	1800.0 U
Acenaphthene	--	--	--	--	--	--	--	--	--	--	27000.0 J	1800.0 U
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	--	40000.0 J	--	--	1800.0 U
PESTICIDES	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Heptachlor	--	--	--	190.0	--	--	--	--	--	--	--	22.0 U
Endosulfan II	--	--	--	--	252.0	1552.0	--	--	--	--	--	43.0 U
INORGANICS	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Arsenic	--	--	--	46.0	--	--	--	--	--	--	--	6.5
Barium	--	--	--	--	--	533.0	--	--	--	--	--	173.0
Calcium	--	--	52700.0	56200.0	--	--	--	--	17100.0	38500.0	13000.0	4060.0
Chromium	--	--	--	--	--	--	--	--	994.0	256.0	260.0	27.5
Cobalt	--	16.1	--	--	20.2	--	--	19.2	--	--	16.8	9.2 U
Lead	--	--	--	618.0	--	--	--	167.0	--	--	163.0	43.0
Mercury	--	--	--	0.3	0.2	--	--	.48	--	--	--	.06U
Selenium	--	--	--	--	--	--	--	--	22.0	--	--	.3 U
Vanadium	--	--	--	--	--	--	--	--	150.0	--	--	33.3
Zinc	--	--	--	--	--	--	--	--	704.0	535.0	--	103.0
Cyanide	--	--	--	--	--	2.8	--	--	--	--	--	--

Clark Oil & Refining Corp.
ILD 041889023

SAMPLING POINT	G101	G503
	12-11-90	12-12-90
PARAMETER		
INORGANICS	(ppb)	(ppb)
Chromium	14.8	13.9 U
Sodium	69900.0	16100.0
Sulfide	14000.0	1000.0 U

4. IDENTIFICATION OF SOURCES

4.1 Introduction

In this section the author will briefly discuss the various hazardous waste sources which have been identified in the initial stages of the CERCLA site investigation.

Information concerning the size, volume, and waste composition of each source has been derived throughout the initial site assessment, reconnaissance visits, and the screening site inspection sampling action. It should be pointed out, however, that the total number and nature of each of the sources identified below may be subject to change, as the site progresses through the CERCLA site investigation program and receives further investigation. Figure 4-1 provides a map for source location information.

4.2 TEL Storage Building

Tetra-ethyl lead was used by Clark Oil as an anti-knock compound in the production of leaded gasoline. TEL was stored from this 800 square foot building located in the northwest corner of the facility (see Appendix C). All TEL has been removed, however, the bulk storage area remains and is awaiting removal by a contractor. Storage capacity of the building is unknown. Samples taken from the north and south sides of the building contained analytically significant levels of numerous volatiles, naphthalene, and cobalt (see

Table 3-4). Pathways of concern include groundwater and soil exposure.

4.3 Leaded Tanks (35-1 and 35-2)

Leaded tanks 35-1 and 35-2 are located in the northwest corner of the facility approximately 380 feet east of the TEL storage building. The tanks are surrounded by an unlined berm, approximately 500 square feet in area. Sample results from the inspection showed analytically significant levels of numerous volatiles, semi-volatiles, Heptachlor, and metals (see Table 3-4).

4.4 Tank 10-2

Tank 10-2 had been in use for 48 years, and had stored DAF Float, Slop Oil Emulsions, and API Separator Sludge. These wastes had been pumped into Tank 10-2 from the wastewater treatment process, and were reused by Clark in the production of petroleum coke. The field operations office in Collinsville had reported that the bermed area lacked adequate secondary containment. Visable contamination within the bermed area was noted in February of 1989.

Clark stated in a letter to this Agency in March of 1989 that the tank was no longer in operation and that a complete clean-up of the tank and contaminated soil was to be completed in May, 1989.

A sample taken in the northwest corner of the bermed area showed analytically significant levels of Pyrene, Benzo(a)Anthracene, Endosulfan II, Cobalt and Mercury (see Table 3-4). Pathways of concern include: groundwater and soil exposure.

4.5 Tank Bottoms Pit

The tank bottoms pit is unlined and is located near the northeast corner of the facility and is approximately 7000 square feet in area. Analytically significant levels of volatiles, semi-volatiles, Endosulfan II, and metals (see Table 3-4 were detected in the samples.
Pathways of concern include groundwater and soil exposure.

4.6 Stormwater Retention Basin

The stormwater retention basin is located at the eastern boundary of the facility and occupies an area of approximately 125,000 square feet. The unlined basin catches runoff from the facility. Visual signs of hydrocarbon contamination were apparent during the reconnaissance inspection conducted on October 30, 1990.

Analytically significant levels of acetone and metals were detected in the sample taken from the north bank of the retention basin near the inlet pipe. High levels of volatiles, semi-volatiles, and metals were detected in the sample taken at the northwest point of the east bank of the

basin (see Table 3-4).

Pathways of concern include: groundwater and soil exposure pathway (workers on-site), and the surface water pathway for the environmental threat (the Illinois Department of Conservation's National Wetland Inventory maps have designated this area, as well as several others at this site as wetlands.

4.7 Former Treatment Lagoons

Clark Oil used three lagoons located west of the levee and south of Hawthorne Street for treatment of wastewater prior to the construction of the current treatment facility. The lagoons received effluent from Clark's oil traps and filter system. Effluent was then discharged to the Mississippi River from these lagoons. Volume of these lagoons is unknown, and is dependent upon the level of the river. Analytically significant levels of metals were detected in the sample taken from the northeast corner of the first stage lagoon near an abandoned effluent discharge pipe (see Table 3-4).

Pathways of concern is groundwater, and surface water- including the environmental threat that these metals may pose, and also drinking water due to the number of intakes located downstream from these lagoons. The threat to the human food chain is also a potential threat.

4.8 Illegal Dumpsite

Located west of the lagoon system, this area was used by Clark for demolition debris, however, an unknown sludge was reported present by the Collinsville field office on December 14, 1978. Clark Oil was informed by the Agency that they were in violation of Agency regulations.

Analytically significant levels of volatiles, semi-volatiles, and metals were detected in samples collected in December of 1990.

Pathways of concern include: groundwater and surface water.

5.0 MIGRATION PATHWAYS

5.1 Introduction

This section discusses data and information that apply to potential migration pathways and targets of TCL compounds that can be attributed to Clark Oil and Refining Corporation. The pathways of concern are groundwater, surface water, and soil exposure (direct contact). The air migration pathway is also noted.

5.2 Groundwater Pathway

The Groundwater Migration Pathway is of concern at this site due to the potential for the contaminants that have been released during spills and leaks to the soil to find their way into the groundwater system.

Geologic and hydrogeologic information was made available through Illinois State Water Survey (ISWS) well logs, Illinois State Geological Survey reports, and IEPA files.

Clark Oil and Refining Corporation/Wood River Refinery, is located in the Mississippi River Valley of the East St. Louis area commonly referred to as the "American Bottoms". Water-yielding deposits of the area are permeable sands and gravels in unconsolidated valley fill. In the vicinity of the site, the upper 20 to 30 feet consists of silts and clays with discontinuous sand lenses present in some areas, with

materials coarsening with depth. The most favorable water-yielding deposits usually occur at depths of 60 to 90 feet. Studies of the aquifer suggest a hydraulic conductivity of 2,000 gallons/day from a saturated thickness of 75 to 100 feet.

The aquifer of concern consists of the entire unconsolidated alluvial deposits overlaying the limestone bedrock of the area.

The direction of groundwater flow in the refinery operations area is to the southeast. Flow in this area is artificially influenced by industrial well withdrawals, with lesser cones of depression located within the regional flow regime. Flow direction in the lagoon areas to the west of the levee is to the east, also artificially induced by pumpage with some recharge expected from the Mississippi River.

There are four public water supply systems utilizing the aquifer of concern within a four mile radius of the site (see Appendix A for public well locations). The Village of Hartford has four municipal wells serving 1,900 people, five Wood River wells supply 12,446 people, three Roxana wells serve 3,873 people and seven Bethalto well serve 22,783 residents. Located less than four miles from the site is East Alton's well field serving 7096 people. The five above mentioned municipalities distribution systems are all

interconnected and with the addition of the few area residents using private wells brings the total population potentially affected by groundwater to approximately 62,424. A listing of the number of public wells and approximate number of private wells and users in each distance category are identified below.

Distance	Wells	Private Well Population	Total Population
0-1/4 mile	0	0	0
1/4-1/2 mile	0	0	0
1/2-1 mile	9	8	1918
1-2 miles	21	50	1308
2-3 miles	165	595	40,034
3-4 miles	130	316	20,422

5.3 Surface Water

Clark Oil and Refining's property west of the levee and Hartford is situated in the 30-year floodplain of the Mississippi River between the Mississippi River mile 196 and 198. According to the St. Louis District of the Army Corps of Engineers, the highest river stage on record occurred in April of 1973. During this time the lagoons became a part of the river as the stage crested at 431.3 feet. The predicted 30-year, 100-year, and 500-year flood events would reach a maximum elevation at river mile 197 of 434 feet, 436.8 feet, and 441.5 feet respectively.

Two surface water intakes are located downstream of Clark Oil. Illinois-American Water Company has an intake 4.5 miles downriver near Mississippi River mile 192. The St. Louis intake is located north of river mile 190, 6.2 miles downriver (see Appendix B). Collectively, these intakes supply millions of people with water.

Pool 27 of the Mississippi River is used extensively for fishing and recreational purposes according to the Illinois State Atlas.

The illegal dump and the former treatment lagoons are sources that could contribute to contaminants entering the surface water pathway. Of concern in this pathway are the drinking water intakes that are located downstream, most notably, those used by the City of St. Louis.

The Environmental threat is also of concern at this source. According to maps by the U.S. Department of the Interior, this lagoon area, located west of the levee, is a noted wetland area. And, as was noted previously, Clark representatives have stated that people have been seen fishing in the lagoon area.

According to maps received from the Illinois Department of Conservation, National Wetlands Inventory, there are also designated wetland areas in the storm water retention ponds,

as well as several other areas within the operations area.

5.4 Air Releases to the air were observed during the SSI while collecting soil/sediment and groundwater samples. Upwind and downwind air samples of the facility failed to document an observed release. A photo-ionization detector (HNU) with an 11.7 eV lamp was used to screen the soil/sediment samples and groundwater samples and monitor for any air releases.

Approximately 34,000 people live within four miles of Clark Oil and Refining.

The following table provides information concerning populations located within a 4-mile radius of the Clark Oil facility.

Distance	Population
On a source	0
Greater than 0-1/4 mile	0
Greater than 1/4-1/2 mile	40
Greater than 1/2-1 mile	3817
Greater than 1-2 miles	10398
Greater than 2-3 miles	10359
Greater than 3-4 miles	13817

5.5 Soil Exposure

The soil exposure threat to the approximately 500 Clark workers within the operations area of the facility at Clark. However, direct exposure by the public is not of concern in

the operations area of the facility due to the area being fenced and the security guards located at the entrance. The lagoon areas west of the levee, however, do not have access control and Clark Oil representatives stated that people have been seen fishing in the lagoons on Clark property.

Approximately 2,000 people live within one mile of the lagoon area west of the levee.

6. BIBLIOGRAPHY

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USGS, 1974, Bethalto, IL. Quadrangle, 7.5 Minute Series.

SDMS US EPA Region V

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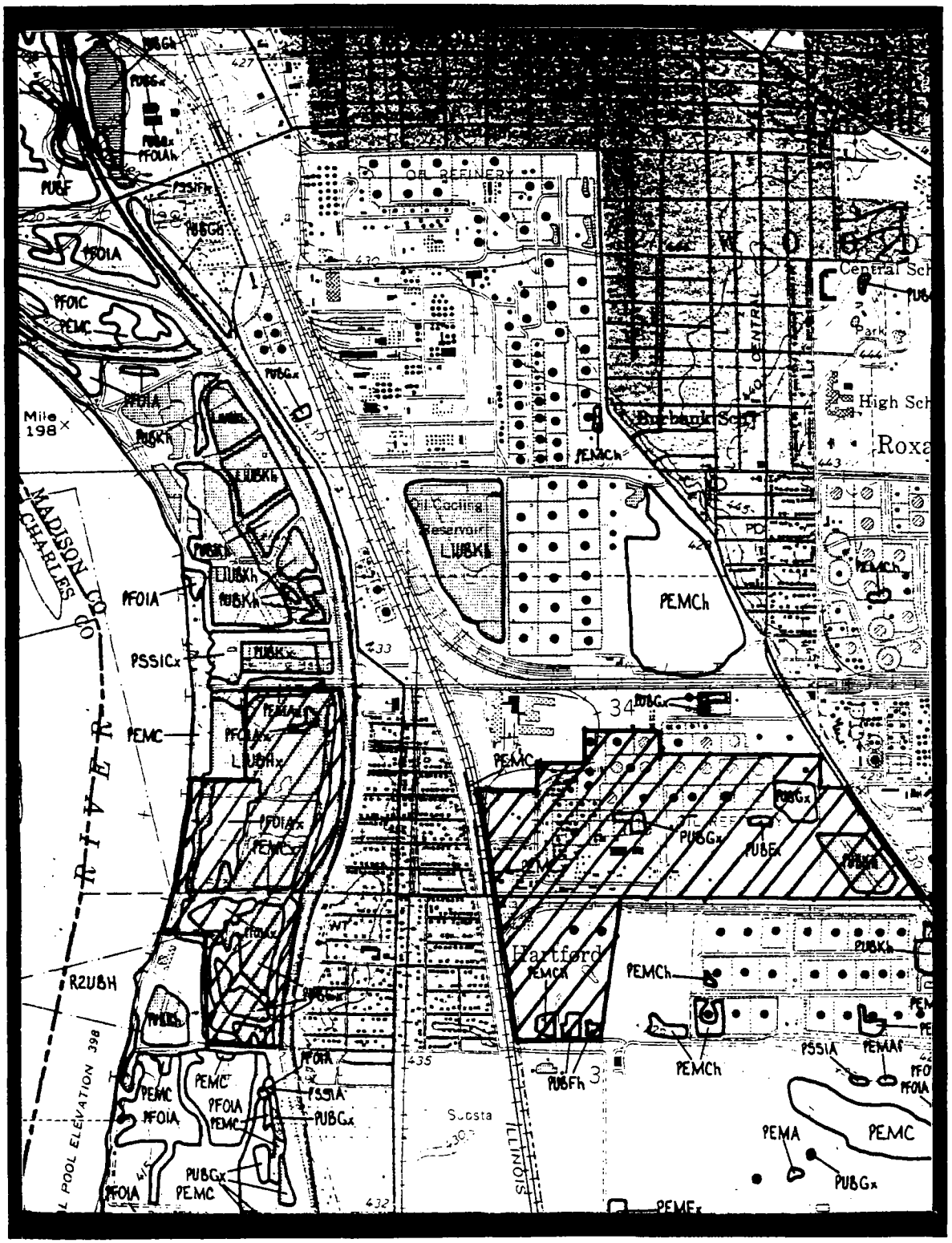
APPENDIX A – SITE 4-MILE MAP; APPENDIX B - 15-MILE SURFACE WATER MAP

☐ Document is available at the EPA Region 5 Records Center.

Specify Type of Document(s) / Comments:

APPENDIX A

APPENDIX B



Source: IEPA, 1990. Base Map: U.S. Department of the Interior National Wetlands Inventory Map, 1987.

Scale: 1:24000

SDMS US EPA Region V

Imagery Insert Form

Document ID: 295816

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APPENDIX C - PLOT PLAN REFINERY REDUCED

☐ Document is available at the EPA Region 5 Records Center.

Specify Type of Document(s) / Comments:

APPENDIX C

APPENDIX D

TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane
Bromomethane
Vinyl Chloride
Chloroethane
Methylene Chloride
Acetone
Carbon Disulfide
1,1-Dichloroethene
1,1-Dichloroethane
1,2-Dichloroethene (total)
Chloroform
1,2-Dichloroethane
2-Butanone
1,1,1-Trichloroethane
Carbon Tetrachloride
Vinyl Acetate
Bromodichloromethane
1,2-Dichloropropane
cis-1,3-Dichloropropene
Trichloroethene
Dibromochloromethane
1,1,2-Trichloroethane
Benzene
trans-1,3-Dichloropropene
Bromoform
4-Methyl-2-pentanone
2-Hexanone
Tetrachloroethene
1,1,2,2-Tetrachloroethane
Toluene
Chlorobenzene
Ethylbenzene
Styrene
Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane
bis(2-Chloroethyl)Ether
Benzyl Alcohol
bis(2-Chloroisopropyl)Ether
N-Nitroso-Di-n-Propylamine
Nitrobenzene
Hexachlorobutadiene
2-Methylnaphthalene
1,2,4-Trichlorobenzene
Isophorone
Naphthalene
4-Chloroaniline
bis(2-chloroethoxy)Methane
Hexachlorocyclopentadiene
2-Chloronaphthalene
2-Nitroaniline
Acenaphthylene
3-Nitroaniline
Acenaphthene
Dibenzofuran
Dimethyl Phthalate
2,6-Dinitrotoluene
Fluorene
4-Nitroaniline
4-Chlorophenyl-phenylether
2,4-Dinitrotoluene
Diethylphthalate
N-Nitrosodiphenylamine
Hexachlorobenzene
Phenanthrene
4-Bromophenyl-phenylether
Anthracene
Di-n-Butylphthalate
Fluoranthene
Pyrene
Butylbenzylphthalate
bis(2-Ethylhexyl)Phthalate
Chrysene
Benzo(a)Anthracene
3,3'-Dichlorobenzidene
Di-n-Octyl Phthalate
Benzo(b)Fluoranthene
Benzo(k)Fluoranthene
Benzo(a)Pyrene
Indeno(1,2,3-cd)Pyrene
Dibenz(a,h)Anthracene
Benzo(g,h,i)Perylene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid
Phenol
2-Chlorophenol
2-Nitrophenol
2-Methylphenol
2,4-Dimethylphenol
4-Methylphenol
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
4-Chloro-3-methylphenol
2,4-Dinitrophenol
2-Methyl-4,6-dinitrophenol
Pentachlorophenol
4-Nitrophenol

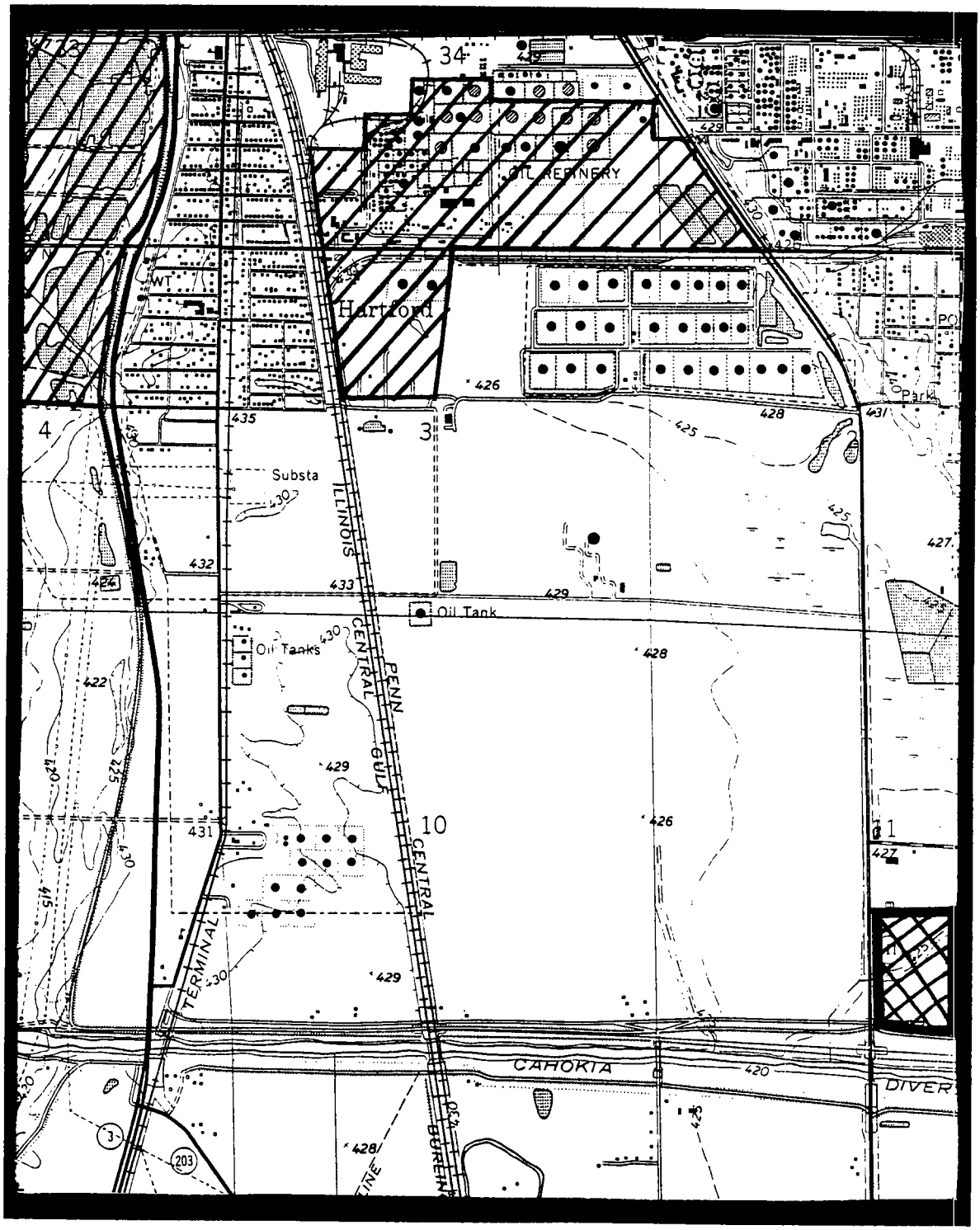
Pesticide/PCB Target Compounds

alpha-BHC
beta-BHC
delta-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin Ketone
Endosulfan Sulfate
Methoxychlor
alpha-Chlorodane
gamma-Chlorodane
Toxaphene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260

Inorganic Target Compounds

Aluminum
Antimony
Arsenic
Barium
Beryllium
Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Potassium
Selenium
Silver
Sodium
Thallium
Vanadium
Zinc
Cyanide
Sulfide
Sulfate

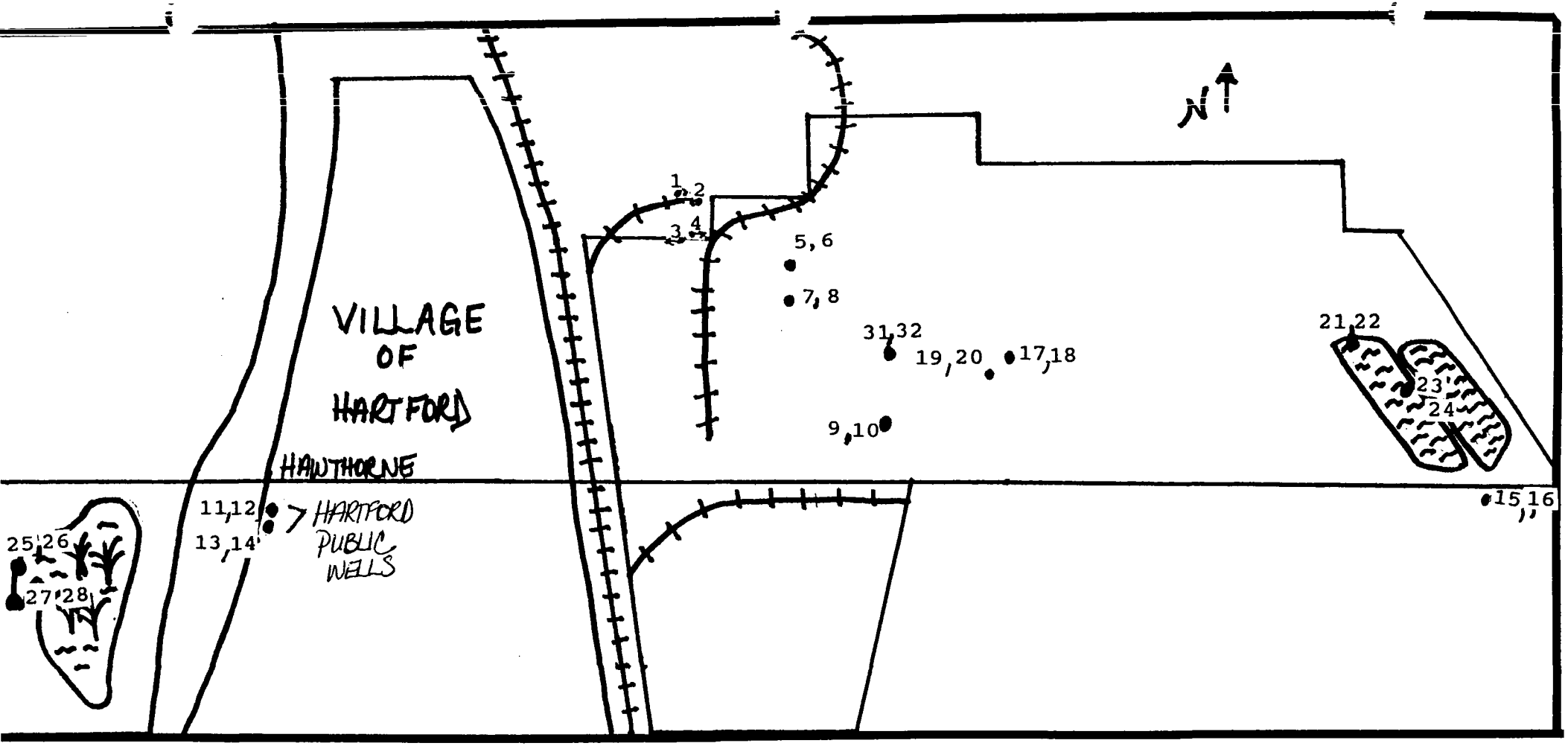
APPENDIX E

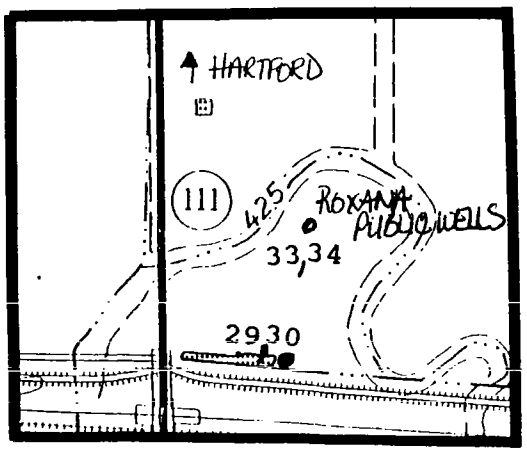


Source: IEPA, 1992. Base Map: USGS Topographic Map, 1974

Scale 1:24000

REFERENCE FOR PHOTOGRAPH LOCATION MAP





Photograph Location Map

DATE: December 11, 1990

TIME: 8:45 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 1

LOCATION: L0312340008

Clark Oil and Refining Corp.

ILD041880238

PICTURE TAKEN TOWARD: E

COMMENTS: Photo taken at sample X101 at the north side of TEL storage building.

DATE: December 11, 1990

TIME: 8:45 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 2

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: W

COMMENTS: Photo taken at sample X101 at the northside of TEL storage building.

DATE: December 11, 1990

TIME: 9:15 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 3

LOCATION: L0312300082

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: NW

COMMENTS: Photo taken at sample X102. Note TEL storage area in the background.

DATE: December 11, 1990

TIME: 9:15p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 4

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: NW

COMMENTS: Photo taken at sample X102.

DATE: December 11, 1990

TIME: 9:55 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 5

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: SE

COMMENTS: Photo taken at sample X104 inside berm of leaded gasoline storage tanks

DATE: December 11, 1990

TIME: 9:55 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 6

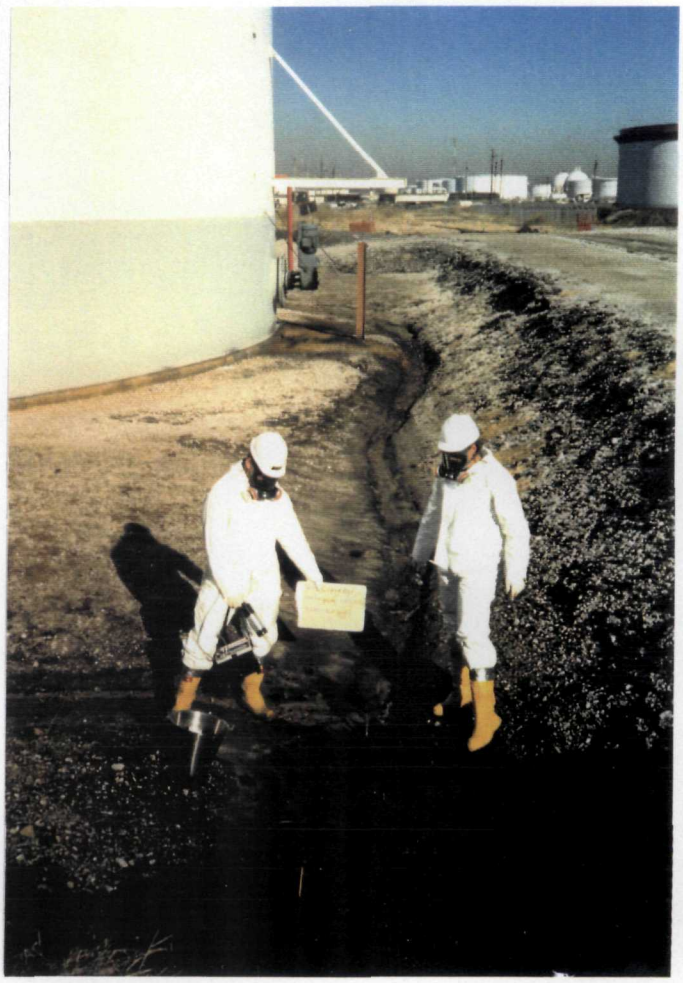
LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at sample X104.



DATE: December 11, 1990

TIME: 9:15 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 15

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: E

COMMENTS: Photo taken at sample X103 outside Clark perimeter fence in ditch near intersection of Rts 111 & 114.

TKB

DATE: December 12, 1990

TIME: 2:55 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 16

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: W

COMMENTS: Photo taken at X103.

TKB

DATE: December 12, 1990

TIME: 10:25 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 17

LOCATION: L0312340008

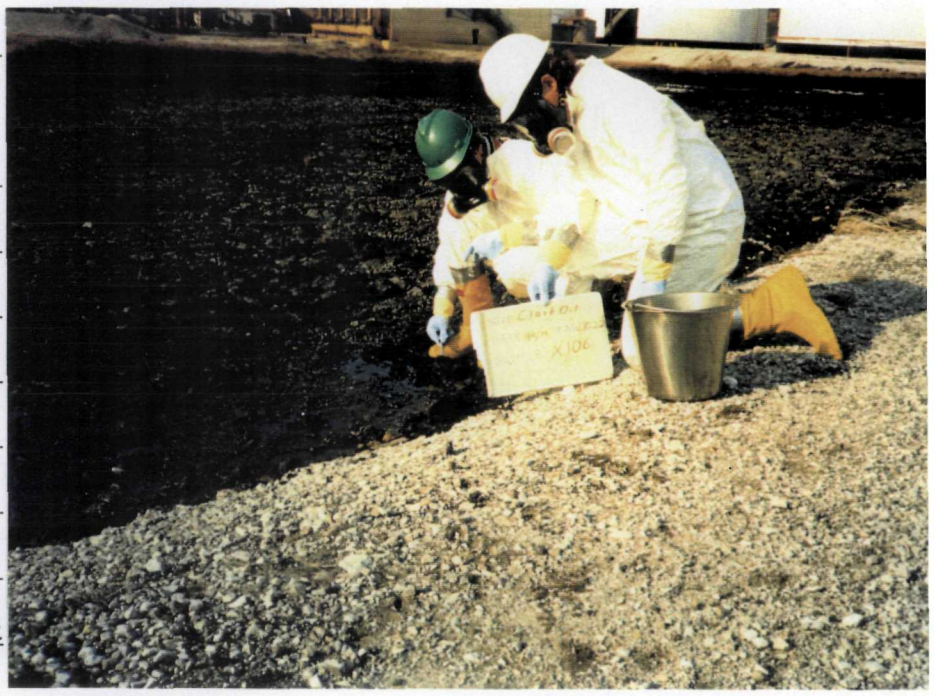
Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: NW

COMMENTS: Photo taken at

sample X106- tank bottoms pit



DATE: December 12. 1990

TIME: 10:25 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 18

LOCATION: L0312340008

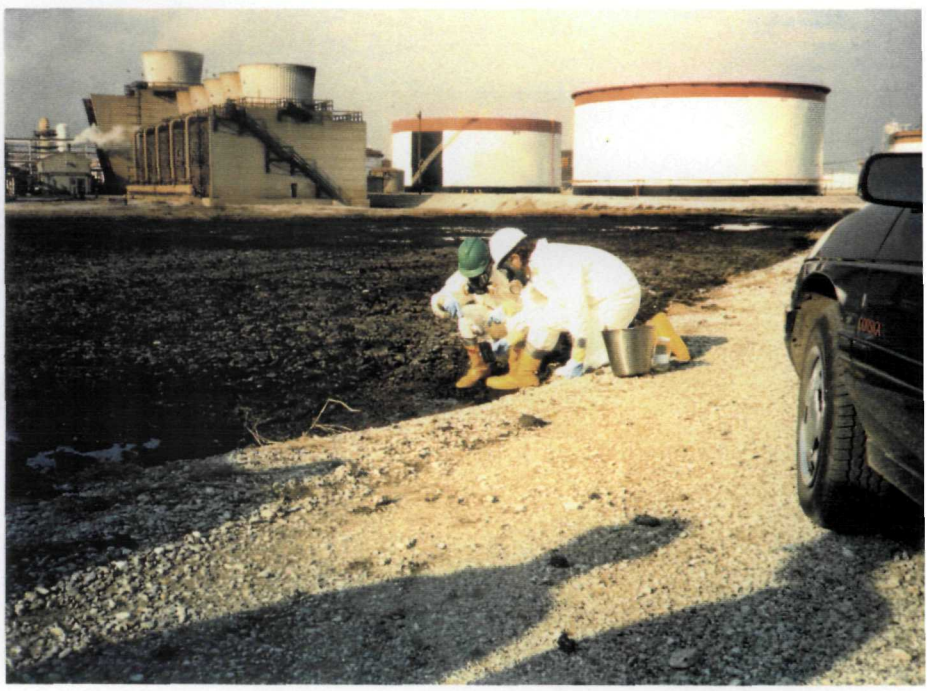
Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: NW

COMMENTS: Photo taken at

sample X106.



DATE: December 12, 1990

TIME: 10:50 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 19

LOCATION: L0312340008

Clark Oil and Refining Corp.

ILD041880238

PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at sample X107. Photo of tank bottoms pit.

DATE: December 12, 1990

TIME: 10:50 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 20

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: NE

COMMENTS: Photo taken at sample X107.

DATE: December 12, 1990

TIME: 12:20 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 21

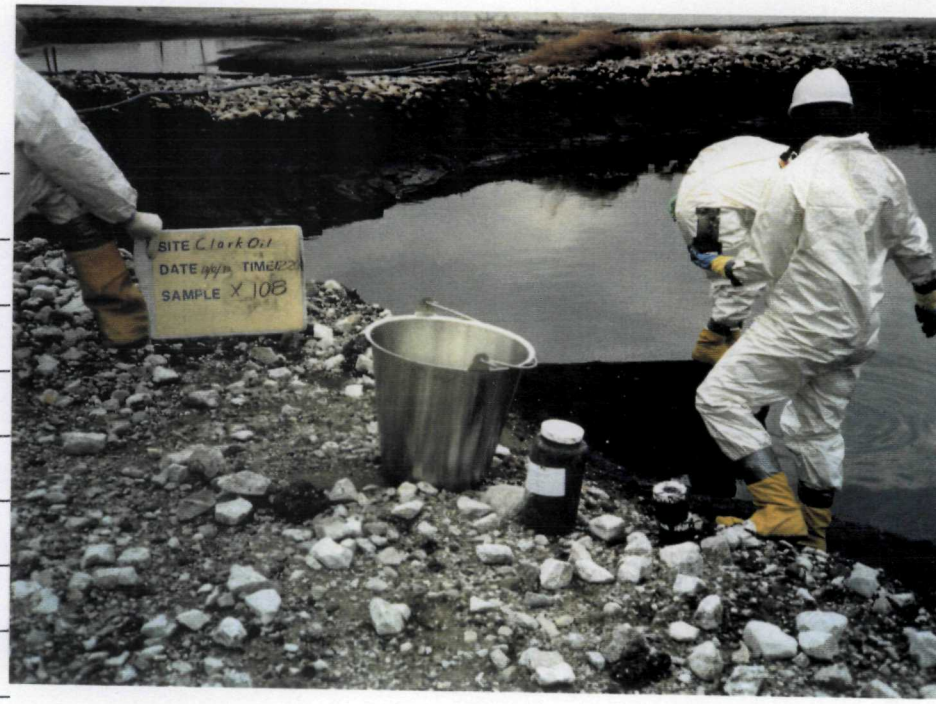
LOCATION: L0312300082

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: E

COMMENTS: Photo taken at sample X108. Photo taken at storm water retention basin.



DATE: December 12, 1990

TIME: 12:20 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 22

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: E

COMMENTS: Photo taken at sample X108.

DATE: December 11, 1990

TIME: 10:20 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 7

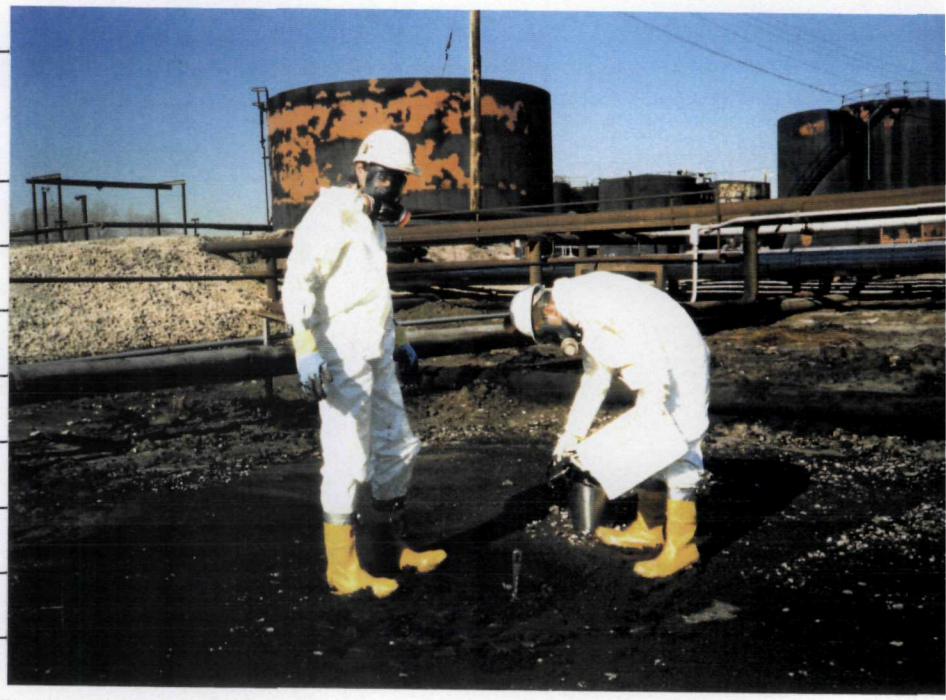
LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: S

COMMENTS: Photo taken at sample X105 inside berm of former site of Tank 10-2.



DATE: December 11, 1990

TIME: 10:20 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 8

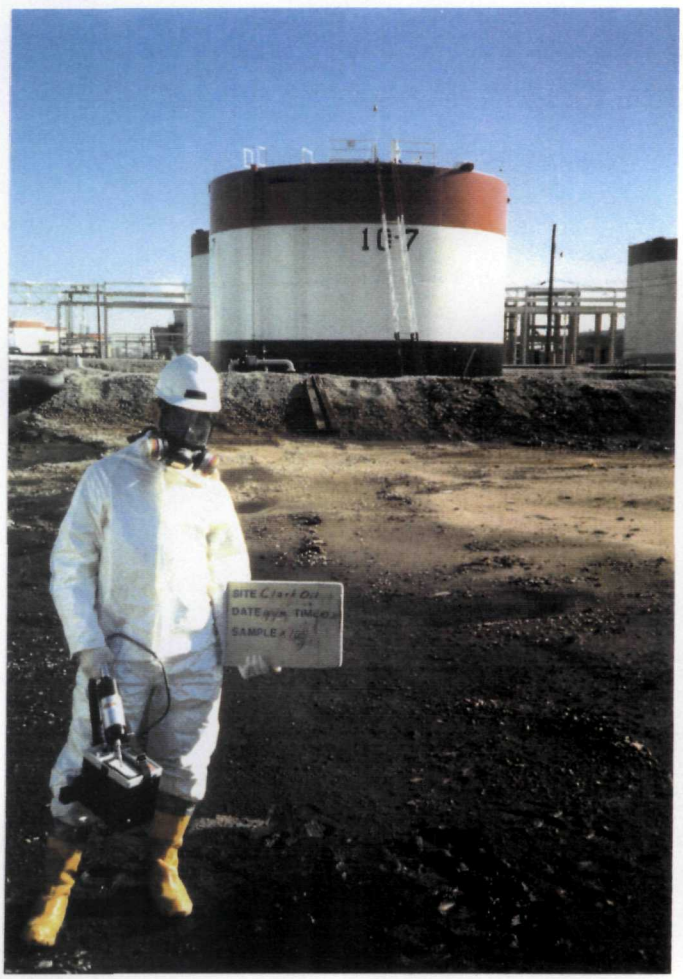
LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: E

COMMENTS: Photo taken at sample X105.



DATE: December 12, 1990

TIME: 12:45 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 23

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: W

COMMENTS: Photo taken at sample X109. Sample taken at storm water retention basin.

DATE: December 12, 1990

TIME: 12:45 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 24

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at X109.

DATE: December 12, 1990

TIME: 1:45 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 25

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: W

COMMENTS: Photo taken at sample X110 near inlet pipe of abandoned lagoon #1 west of levee.

DATE: December 12, 1990

TIME: 1:45 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 26

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: NE

COMMENTS: Photo taken at sample X110.

DATE: December 12, 1990

TIME: 2:20 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 27

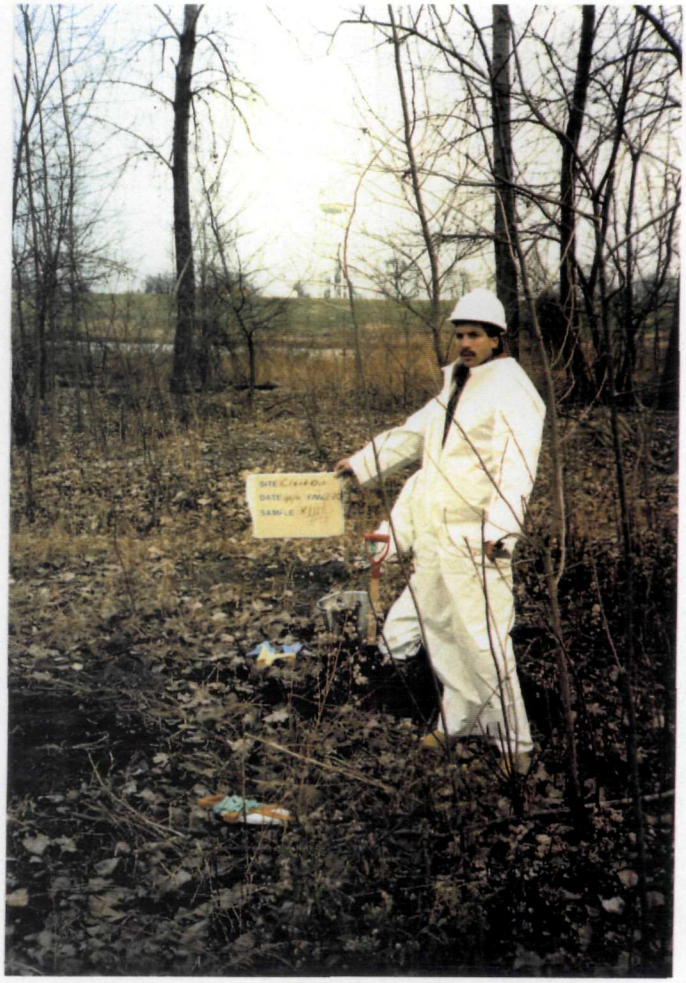
LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: E

COMMENTS: Photo taken at sample X111 in area of alleged dump site west of levee.



DATE: December 12, 1990

TIME: 2:20 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 28

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD:

COMMENTS: Photo taken at sample X111.

DATE: December 12, 1990

TIME: 8:40 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 29

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at

sample X112 (background).

DATE: December 12. 1990

TIME: 8:40 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 30

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at

sample X112.

DATE: December 11, 1990

TIME: 11:25 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER:

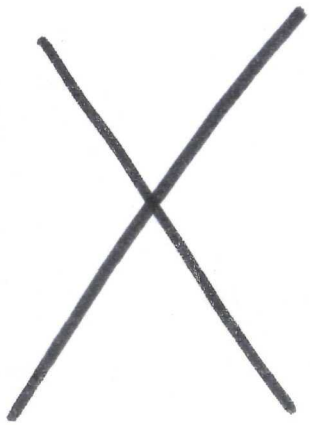
LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD:

COMMENTS: Sample G101, photo not available.



DATE: December 11. 1990

TIME: 11:25 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER:

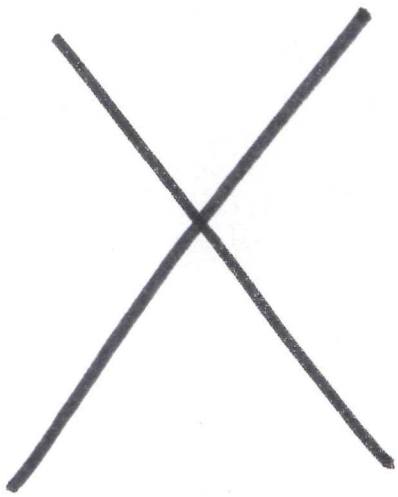
LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD:

COMMENTS: Sample G101, photo not available.



DATE: December 12. 1990

TIME: 11:30 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 31

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at G103- well located inside concrete casement to right of date board.

DATE: December 12. 1990

TIME: 11:30 a.m.

PHOTOGRAPH TAKEN BY:

Ken Corkill

PHOTOGRAPH NUMBER: 32

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: S

COMMENTS: Photo taken at sample G103.

DATE: December 11, 1990

TIME: 3:35 p.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 9

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: W

COMMENTS: Photo taken at sample G104.

DATE: December 11, 1990

TIME: 8:40 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 10

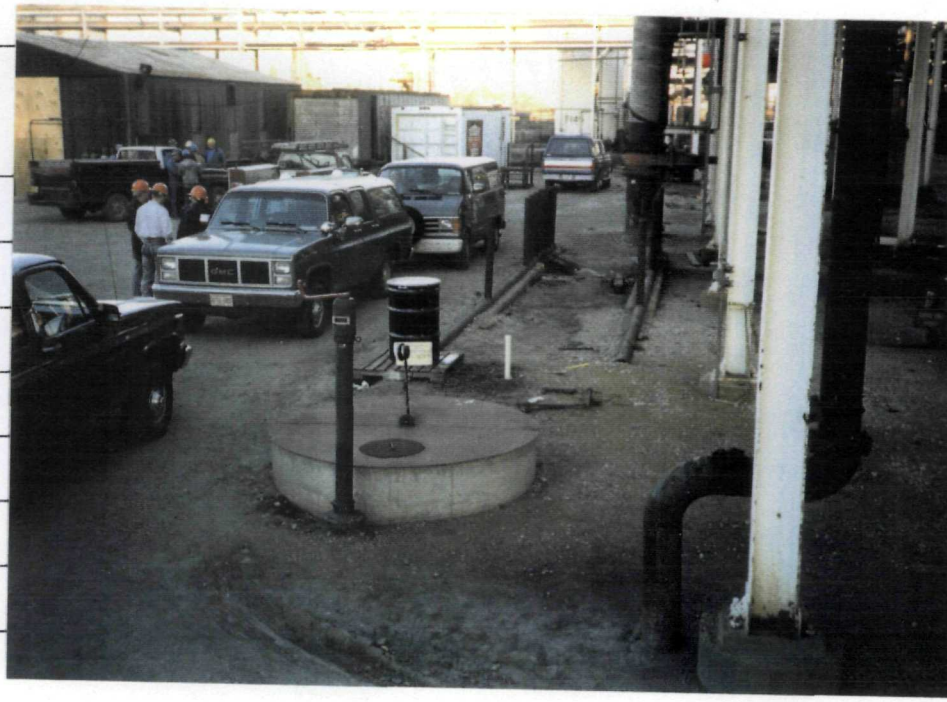
LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: E

COMMENTS: Photo taken at sample G104.



DATE: December 11, 1990

TIME: 4:45 p.m.

PHOTOGRAPH TAKEN BY:

Ken Corkill

PHOTOGRAPH NUMBER: 11

LOCATION: L0312340008

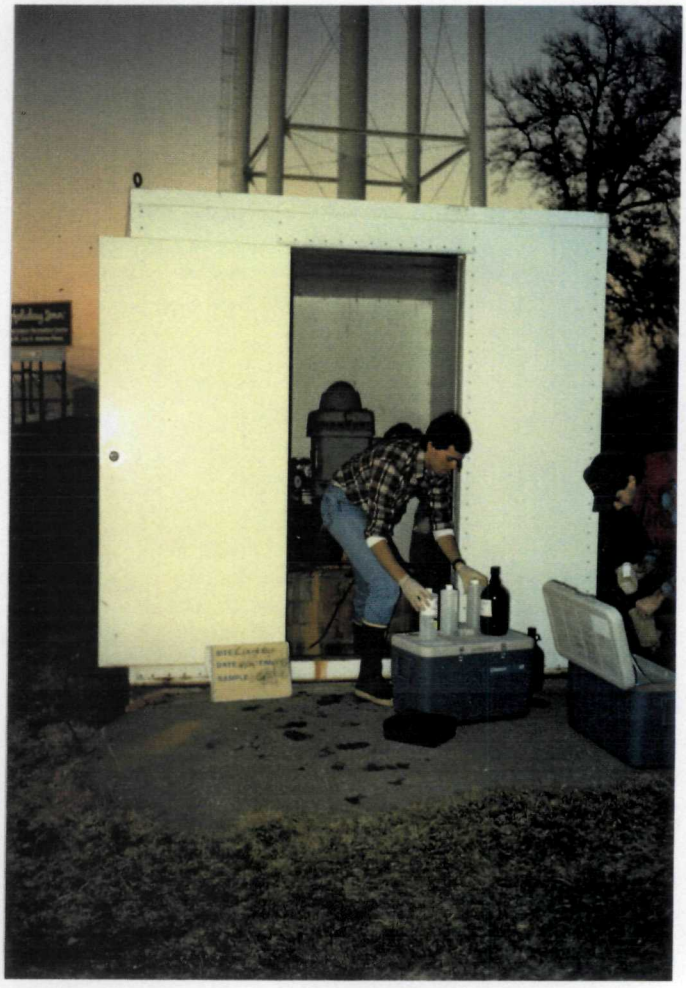
Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at

sample G501- Hartford PW #3.



DATE: December 11. 1990

TIME: 4:45 p.m.

PHOTOGRAPH TAKEN BY:

Ken Corkill

PHOTOGRAPH NUMBER: 12

LOCATION: L0312340008

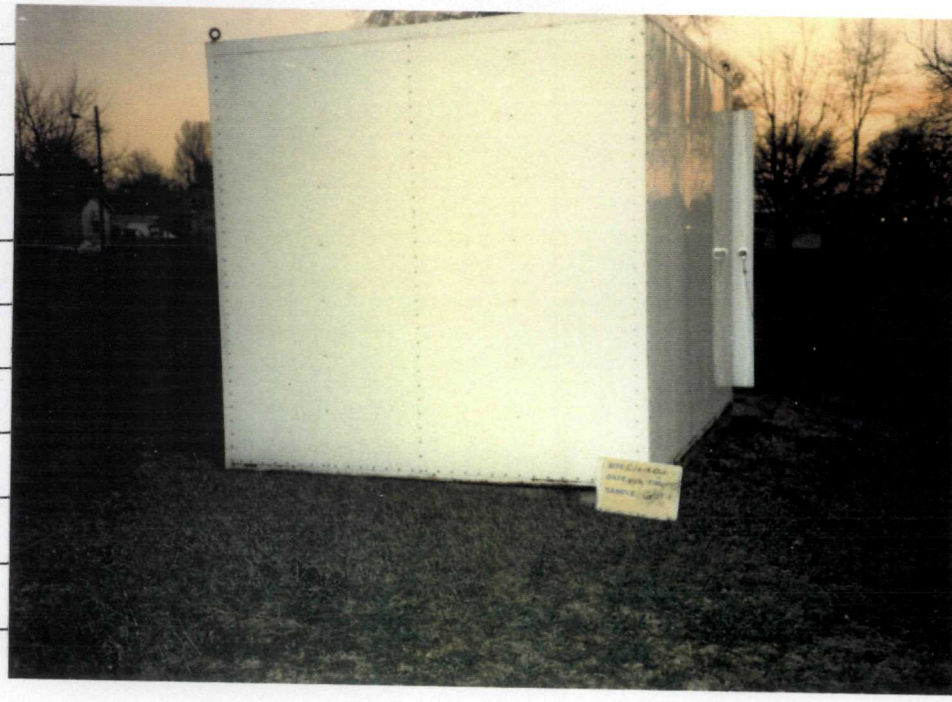
Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: S

COMMENTS: Photo taken at

sample G501.



DATE: December 11. 1990

TIME: 5:05 p.m.

PHOTOGRAPH TAKEN BY:

Ken Corkill

PHOTOGRAPH NUMBER: 13

LOCATION: L0312340008

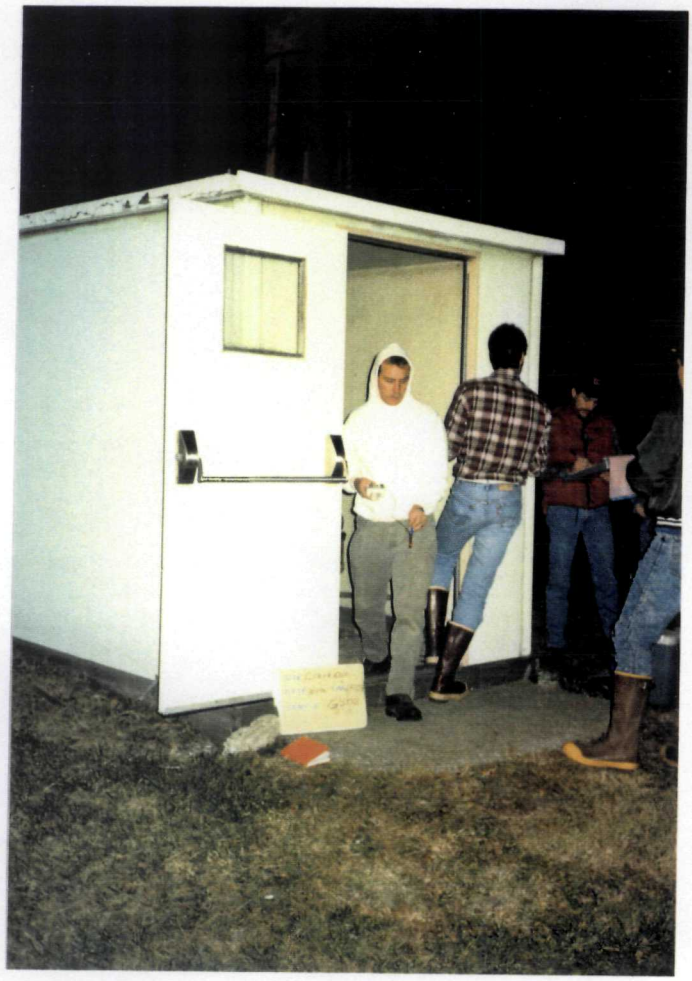
Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at

sample G502- Hartford PW #4.



DATE: December 11, 1990

TIME: 5:05 p.m.

PHOTOGRAPH TAKEN BY:

Ken Corkill

PHOTOGRAPH NUMBER: 14

LOCATION: L0312340008

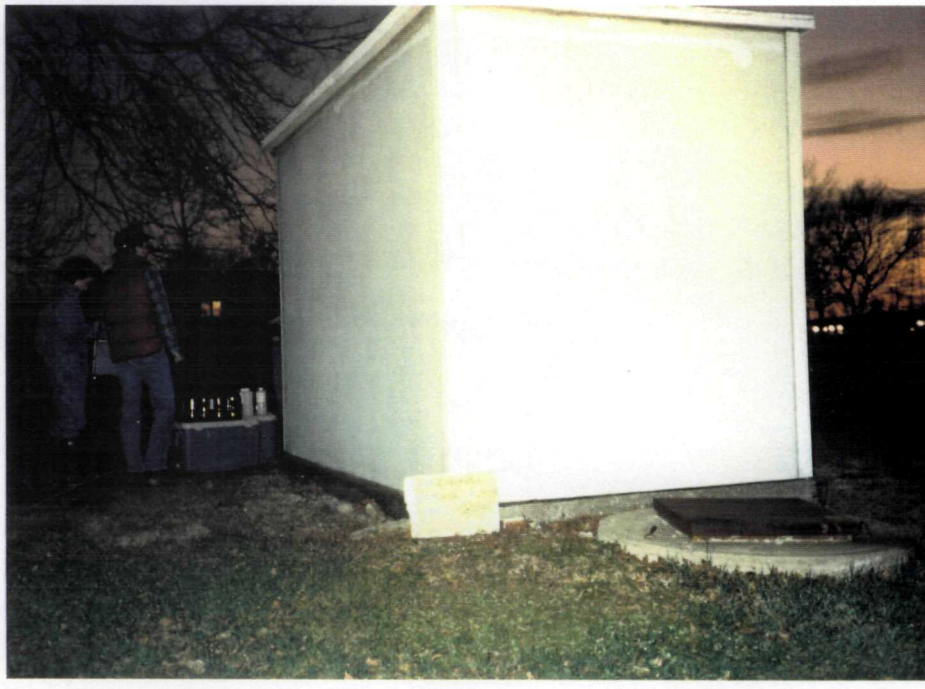
Clark Oil & Refining Corp.

ILD041889023

PICTURE TAKEN TOWARD: S

COMMENTS: Photo taken at

sample G502.



DATE: December 12. 1990

TIME: 8:45 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 33

LOCATION: L0312340008

Clark Oil & Refining Corp.

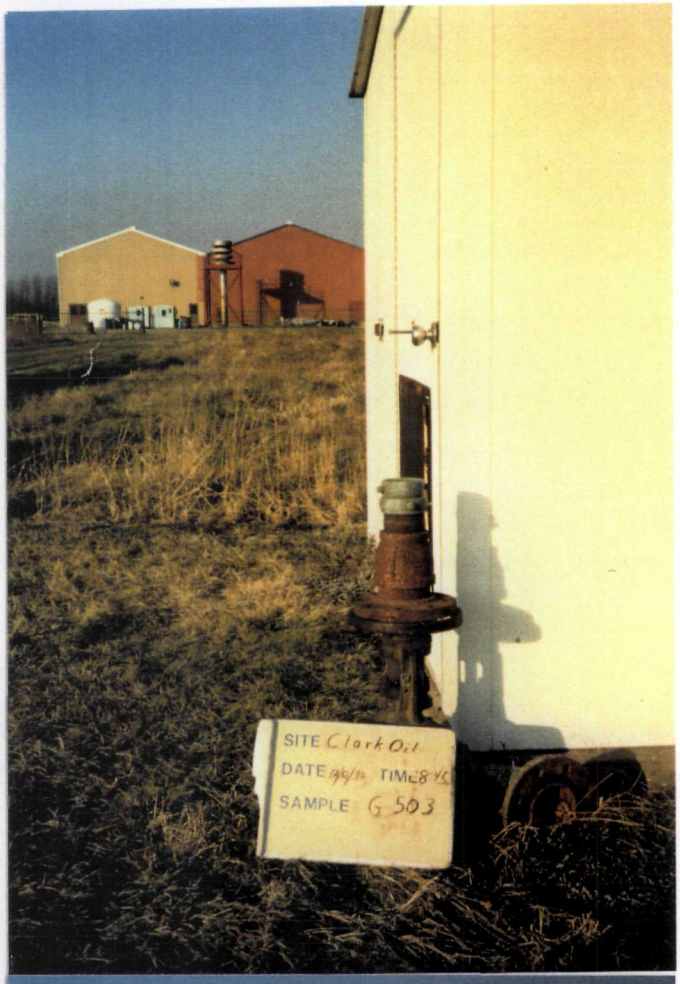
ILD041889023

PICTURE TAKEN TOWARD: W

COMMENTS: Photo taken at

sample G503 - Roxana PW #8 -

well located in pumphouse.



DATE: December 12, 1990

TIME: 8:45 a.m.

PHOTOGRAPH TAKEN BY:

Todd Buchanan

PHOTOGRAPH NUMBER: 34

LOCATION: L0312340008

Clark Oil & Refining Corp.

ILD041889023

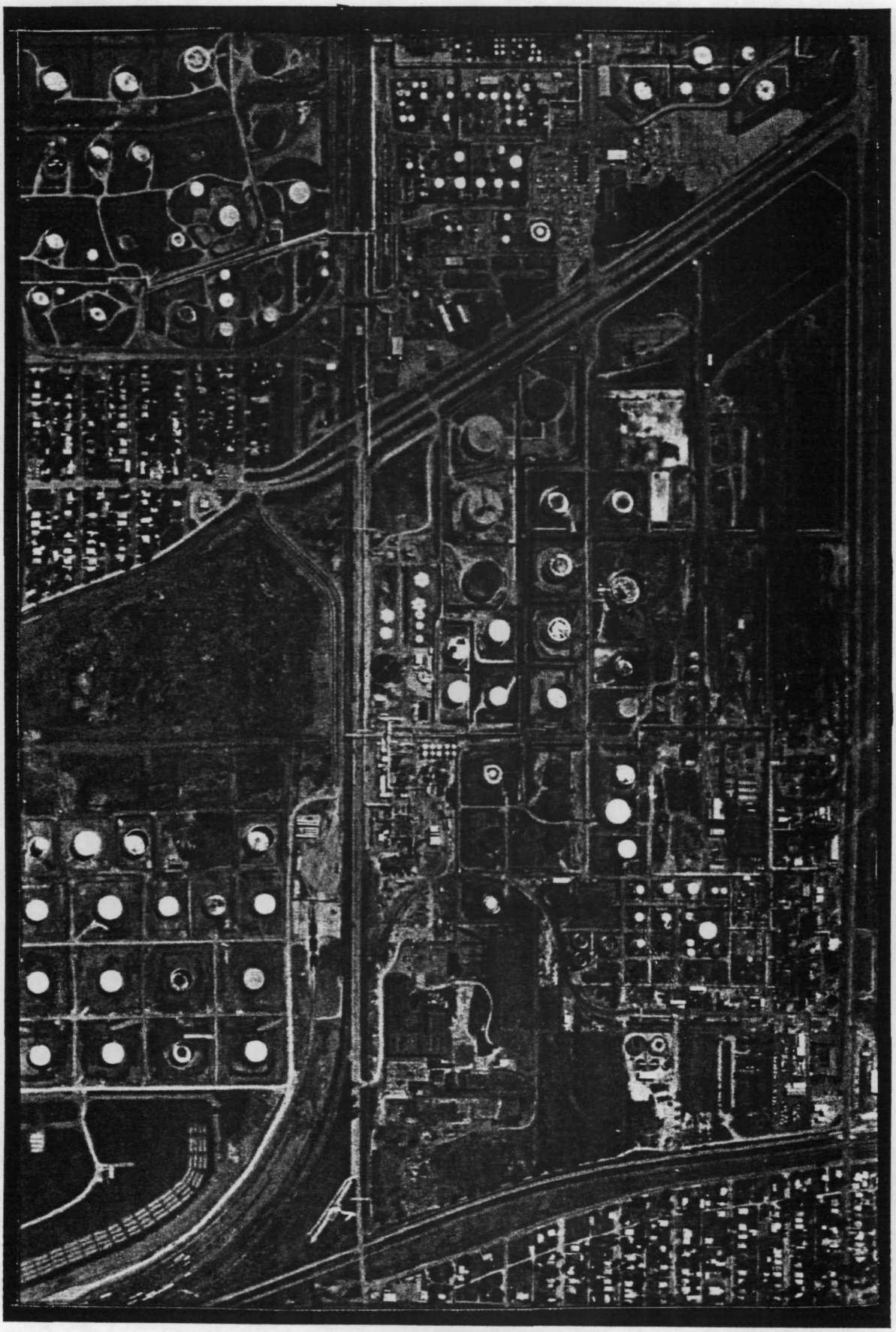
PICTURE TAKEN TOWARD: N

COMMENTS: Photo taken at

sample G503.

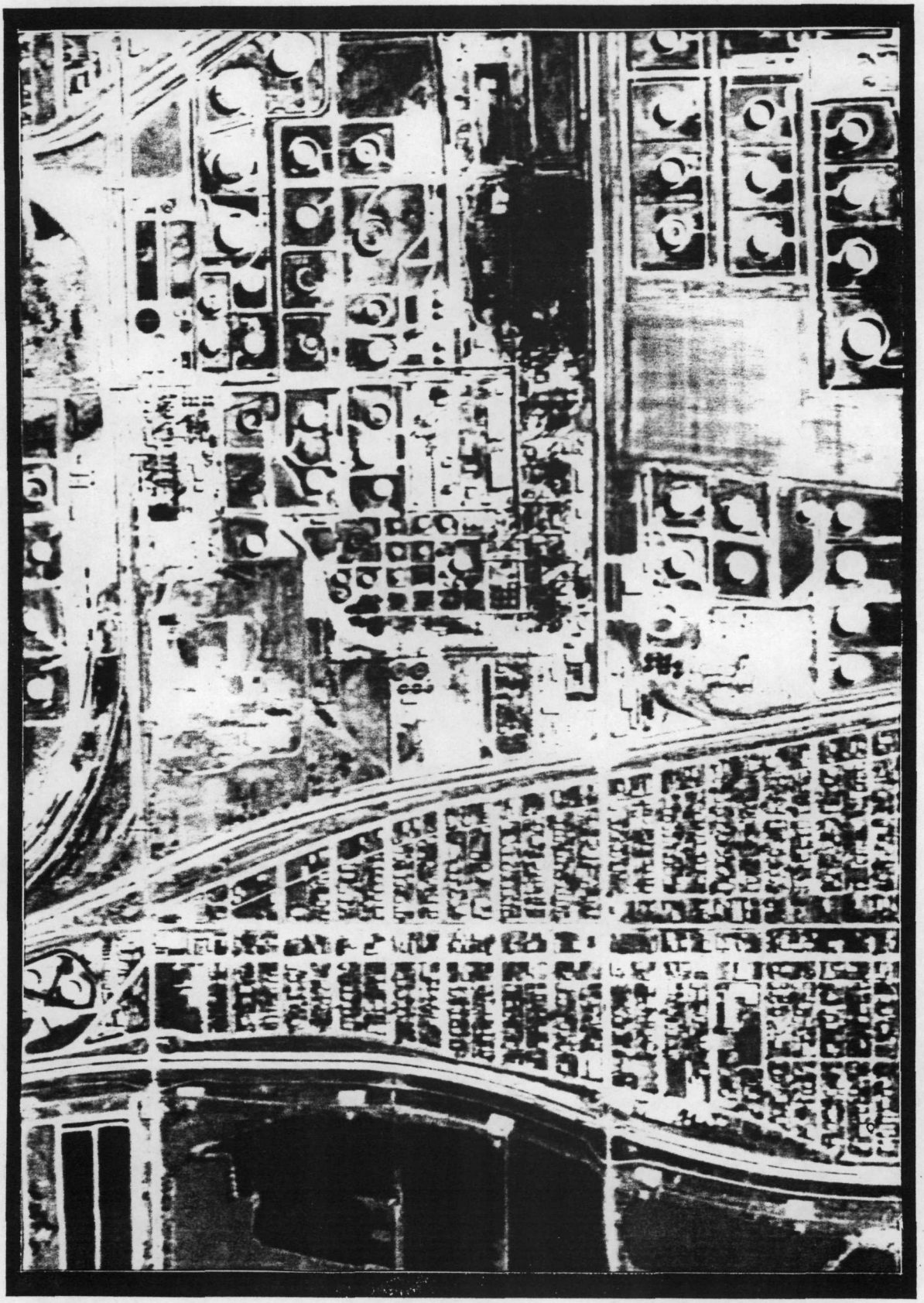
APPENDIX F

N



I.D.O.T. - 1980 Scale: 1": 808'

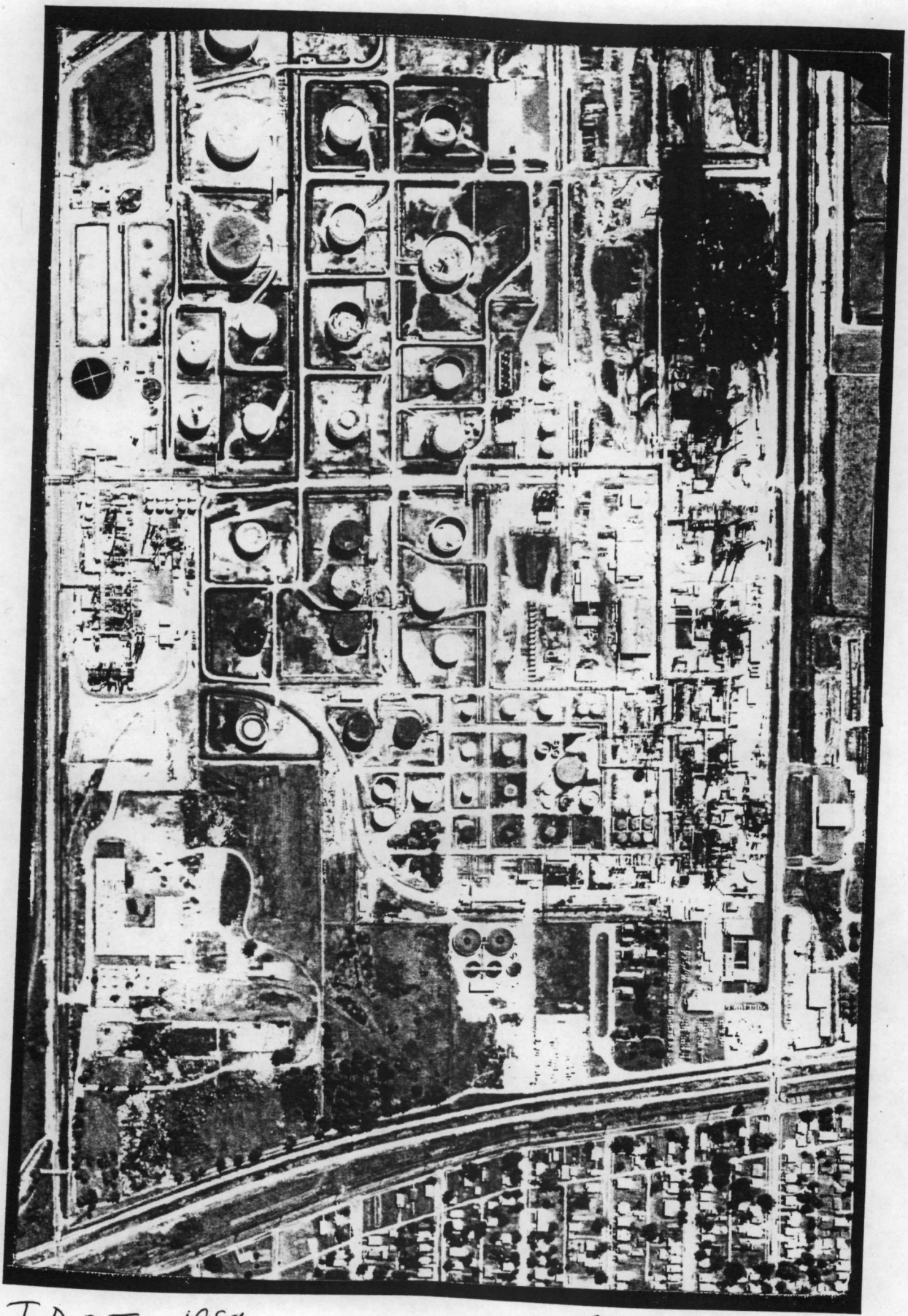
N ←



I.D.O.T. - 1988

Scale: 1" = 881'

N ←



I.D.O.T. - 1981

Scale: 1":429

APPENDIX G

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
      Curb material____. Buried Slub: Yes____No____
   b. Driven ✓. Drive Pipe Diam. 2 in. Depth 65 ft.
   c. Drilled____. Finished in Drift____. In Rock____.
      Tubular____. Gravel Packed____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
BENTONITE	SURFACE	

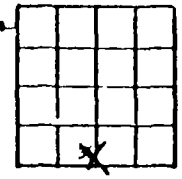
2. Distance to Nearest:
   Building 50 Ft. Seepage Tile Field 100 +
   Cess Pool — Sewer (non Cast iron) 100 +
   Privy — Sewer (Cast iron)____
   Septic Tank 100 + Barnyard____
   Leaching Pit — Manure Pile____
3. Is water from this well to be used for human consumption?
   Yes____ No ✓
4. Date well completed 11-20-71
5. Permanent Pump Installed? Yes ✓ No____
   Manufacturer MYERS Type HCM 150
   Capacity 10-15 gpm. Depth of setting 30-60 ft.
6. Well Top Sealed? Yes ✓ No____
7. Pitless Adaptor Installed? Yes____ No ✓
8. Well Disinfected? Yes ✓ No____
9. Water Sample Submitted? Yes____ No ✓

REMARKS: will have heated pump House for pump protection

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [illegible] Well No.____
    Address [illegible] East Alton, Illinois 62024
    Driller [illegible] License No. 92-152
11. Permit No. ME 1511 Date 5-5-71
12. Water from Sand (Formation) 13. County [illegible]
    at depth 30 to 65 ft.
14. Screen: Diam. 2 in.
    Length: 5 ft. Slot 10
    Sec. 15
    Twp. 4 N
    Rge. 9W
    Elev. 770



SHOW LOCATION IN SECTION PLAT

280'N 25'E SW/c SE SE SW

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
2"	Sch 40	0	65

16. Size Hole below casing: — in.
17. Static level 31 ft. below casing top which is 1 ft. above ground level. Pumping level____ ft. when pumping at____ gpm for____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH TO BOTTOM
Loess Clay & Sand		
Layers		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [illegible] DATE 11-20-71

Madison Co
4N 9W

Sample of water collected from ~~XX~~ farm residence of Louis L. Hoehn on State Route 67 approx 2 miles south of Hartford.

City South of Hartford County Madison

Section 9-26 Twp. No. 4 N. Range 9 W.

Location (in feet from section corner) Approx. 700 feet West and 800 feet North of the S.E. corner of Section 9, T.4 N., R.9 W.

Owner Louis L Hoehn Authority Louis L Hoehn.

Contractor A.J. Bienemann Address South Roxana, Illinois

Date drilled 1947 Elev. above sea level top of well 424 ± MSL. estimated

Depth 85 feet below basement floor. This well is a 4-inch driven well in the basement of the farm residence of Mr. Hoehn. It is equipped with a deep well pump and pumps to a pressure tank. Water is used for domestic use. Sample was collected from a hydrant in yard and temperature was not recorded.

Log

Were drill cuttings saved No Where filed

Size hole 4-inch If reduced, where and how much No

Casing record 4-inch drive pipe.

Cannot measure water level in this well but water level in 40 ft well in yard was at elevation 401.76 when this sample was collected.

Distance to water when not pumping Distance to water is feet after pumping at G. P. M. for hours.

Reference point for above measurements

Type of pump Distance to cylinder

Length of cylinder Length of suction pipe below cylinder

Length stroke Speed

Hours used per day Type of power

Rating of motor Rating of pump in G. P. M.

Can following be measured: (1) Static water level No

(2) Pumping level No (3) Discharge No

(4) Influence on other wells

Temperature of water Not Recorded Was water sample collected yes

Date November 10, 1952 Effect of water on meters, hot water coils, etc.

Date of Analysis Analysis No. 130410 SS

Please send copy of analysis to
Mr. Louis L.Hoehn
Rt 1, Esat Alton, Illinois

Recorder

Date

2807-22617 12

cc to Jones

MAD4N9W-9.2b

November 18, 1952

PARTIAL MINERAL ANALYSIS

Sample of water collected November 10, 1952 from well at farm residence of Louis L. Hoehn on State Route 67, approx. 2 miles South of Hartford, Illinois in Madison County. Location of well: approx. 700' W. and 800' N. of the SE Corner of Section 9, T. 4 N., R. 9 W. Depth: 85 feet below basement floor.

D

LABORATORY NO. 130,410

		PPM.	epm.			PPM.	epm.
Iron (total)	Fe	2.0		Chloride	Cl	8.	.23
				Sulfate	SO_4	113.1	2.35
				Alkalinity (as $CaCO_3$)		308.	6.16
Turbidity		5		Hardness (as $CaCO_3$)		420.	8.40
Color		0		Residue		472.	
Odor		0					

ppm. = parts per million
epm. = equivalents per million
ppm. x .0583 = grains per gallon

STATE WATER SURVEY DIVISION

R. M. King, Asst. Chemist

RMK:it

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ✓. Hole Diam. 30 in. Depth 38 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift ____. In Rock ____.
   Tubular ____. Gravel Packed ✓.
   d. Grout:

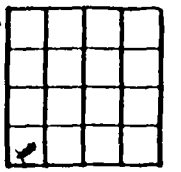
(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 50' Ft. — Seepage Tile Field ____
   Cess Pool ____ — Sewer (non Cast iron) ____
   Privy ____ — Sewer (Cast iron) ____
   Septic Tank 100' — Barnyard ____
   Leaching Pit ____ — Manure Pile ____
3. Well furnishes water for human consumption? Yes ✓ No ____
4. Date well completed ____
5. Permanent Pump Installed? Yes ____ Date ____ No ✓
   Manufacturer ____ Type ____ Location ____
   Capacity ____ gpm. Depth of Setting ____ Ft.
6. Well Top Sealed? Yes ✓ No ____ Type ____
7. Pitless Adapter Installed? Yes ____ No ✓
   Manufacturer ____ Model Number ____
   How attached to casing? ____
8. Well Disinfected? Yes ✓ No ____
9. Pump and Equipment Disinfected? Yes ____ No ____
10. Pressure Tank Size ____ gal. Type ____
    Location ____
11. Water Sample Submitted? Yes ____ No ✓

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Edward Bruchez Well No. ____
    Address East Alton Ill
    Driller Gus Tekemeyer License No. ____
11. Permit No. 34940 Date ____
12. Water from Sand. (Formation) 13. County Madison
    at depth ____ to ____ ft.
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____
    Sec. 10
    Twp. 4N
    Rge. 9W
    Elev. ____



SHOW LOCATION IN SECTION PLAT
SW SW SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
30	Concrete.	39	

16. Size Hole below casing: ____ in.
17. Static level ____ ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
clay	20.	20
Sand	19	39

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Gus Tekemeyer DATE 3-3-76

IDPH 4.06
1/74 – KNB-1

White Copy – Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
   Curb material____. Buried Slab: Yes____No____
   b. Driven X. Drive Pipe Diam. 2" in. Depth 41 ft.
   c. Drilled____. Finished in Drift____. In Rock____.
   Tubular____. Gravel Packed____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 7' 6" Ft. Seepage Tile Field 150'
   Cess Pool____ Sewer (non Cast iron)____
   Privy____ Sewer (Cast iron)____
   Septic Tank____ Barnyard____
   Leaching Pit____ Manure Pile____
3. Is water from this well to be used for human consumption?
   Yes X No____
4. Date well completed 2-4-78
5. Permanent Pump Installed? Yes X No____
   Manufacturer MYERS HCM 150 Type JET
   Capacity 20 gpm. Depth of setting 31 ft.
6. Well Top Sealed? Yes X No____
7. Pitless Adaptor Installed? Yes X No____
8. Well Disinfected? Yes X No____
9. Water Sample Submitted? Yes____ No X

REMARKS:

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner GARY W. AIKEN Well No. 1
    Address ~~SOUTH ROXANA, ILL.~~ Rt 6 Edwardsville, ILL
    Driller JAMES J. BIENEMANN License No. 102-124
11. Permit No. 66400 Date 9-7-77
12. Water from XX SAND (Formation)
    at depth 12 to 40 ft.
13. County MADISON
    Sec. 12 2e
    Twp. 4N
    Rge. 9W
    Elev. 429
14. Screen: Diam. 2 in.
    Length: 5 ft. Slot 10

SHOW LOCATION IN SECTION PLAT
100'N SEC, SW SE 1E

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
2"	SCH. 40 galv steel	0	40

16. Size Hole below casing:____in.
17. Static level 10 ft. below casing top which is 1 ft. above ground level. Pumping level____ft. when pumping at____gpm for____hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOPSOIL	10	10
SANDS FINE TO MEDIUM	30	40

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED James J. Bienemann DATE 2-4-78

White Copy – [illegible] Dept. o[illegible]lic Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO [illegible]LERS

FILL IN ALL PERTINENT INFORMATION REQUE[illegible]D AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

Madison County

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ✓. Hole Diam. 32 in. Depth 107 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ✓. Finished in Drift ✓. In Rock ____.
   Tubular ____. Gravel Packed ✓.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

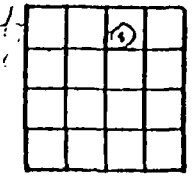
2. Distance to Nearest:
   Building 50 Ft. Seepage Tile Field ____
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank ____ Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes ____ No ✓
4. Date well completed Nov 18 1974
5. Permanent Pump Installed? Yes ✓ No ____
   Manufacturer ____ Type Turbine
   Capacity 500 gpm. Depth of setting 80' ft.
6. Well Top Sealed? Yes ✓ No ____
7. Pitless Adaptor Installed? Yes ____ No ✓
8. Well Disinfected? Yes ____ No ✓
9. Water Sample Submitted? Yes ____ No ✓

REMARKS: Irrigation well

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Charles Losch Well No. 2
    Address R1 EAST ALTON ILL
    Driller E Linker License No. 102-86
11. Permit No. 34803 Date 11-13-1974
12. Water from Sand & gravel Formation 13. County Madison
    at depth 65 to 107 ft.
14. Screen: Diam. 16 in.
    Length: ____ ft. Slot 3/16"
    Sec. 12.4
    Twp. 4N
    Rge. 9W
    Elev. ____



SHOW LOCATION IN SECTION PLAT 1000 FS, 2000 FW, NE. NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
16"	Stock	-1.5	74.2
16"	Steel (Screen)	74.2	106.8

16. Size Hole below casing: ____ in.
17. Static level 19 ft. below casing top which is 1.5 ft. above ground level. Pumping level 24 ft. when pumping at 400 gpm for 1 hours. App.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay and sand	5	5
fine sand	50	55
Gray med sand	5	60
Gray med-Coarse sand	15	75
Med fine tan sand	5	80
Gray med coarse sand	5	85
Gray very Coarse sand	5	90
Tan med-Coarse sand	5	95
Gray Coarse sand	12	107

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Eugene Linker DATE 6-9-'78

APPENDIX H

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	041889023

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Clark Oil + Refining Corporation	Hawthorne Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Hartford,	IL	62048	Madison	119	21

09 COORDINATES LATITUDE	LONGITUDE
38 50 05.0	090 07 59.0

10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
6 11 90 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1941 (BEGINNING YEAR) Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☒ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Todd Buchanan	Environmental Prot. Spec.	IEPA	( )

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Greg Dunn	ERS	IEPA	(217) 782-6760
Ken Corkill	ERS	IEPA	(217) 782-6760
Tim Murphy	ERS	IEPA	(217) 782-6760
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Richard Thomas		Clark Oil, Hawthorne Street	( )
Joe. Bean		Clark Oil, Hawthorne Street	( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	8:00 AM	Sunny, cold -40°F.

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Thomas Crause	Illinois EPA / RPMS	(217) 782-6760

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Kimberlee Nika	IEPA	RPMS	217/782-6760	6 23 92 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	04889023

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- [X] A. SOLID
- [X] B. POWDER, FINES
- [X] C. SLUDGE
- [ ] D. OTHER _____ (Specify)
- [ ] E. SLURRY
- [X] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TONS _____
CUBIC YARDS unknown
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [X] G. FLAMMABLE
- [X] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [X] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	unknown	—	K050, K051, K048
OLW	OILY WASTE	unknown	—	K049, K048
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown	—	K052

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Slop Oil Emulsions-Solids				
SLU-OW	DAF Float				
SLU	API Separator Sludge				
SLU	Heat Exchange Bundle Cleaning Sludge				
MES	Land Tank Bottoms				

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS	NA		FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analyses, reports)*

Illinois EPA/ Division of Land files
Division of Air files
Division of Water files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: IL	02 SITE NUMBER: 04889023

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: ≥ 41,000
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Samples taken at monitoring wells indicated the presence of metals, (groundwater) drinking wells could be affected.

01 [X] B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: ≥ 1,000,000
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Population of the City of St. Louis derives drinking water from intakes located 7mi. downstream of site. Human food chain - fishing.

01 [X] C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: ≥ 38,431
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Release of SO_2 emissions exceeded limitations, according to available information, also - spent catalyst released, caused health concerns.

01 [X] D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Several incidents of fires related to groundwater contamination in the area - these incidents caused (potentially) by leaking transfer pipes underground.

01 [X] E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Workers at operations area have the potential to be affected due to contaminants found in top 2' of soil. Also - area west of levee - due to accessability. People have been seen fishing.

01 [X] F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 220 (Acres)
02 [X] OBSERVED (DATE: 12/11/90) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Samples of soil + sediment indicated significantly elevated levels of contaminants present in soil/sediment.

01 [X] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: ≥ 1,000,000
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Drinking water wells in 4-mile radius as well as City of St. Louis intakes.

01 [X] H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: 300
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact of volatile compounds present.

01 [X] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

General public does not have access to operations area, however, area west of levee is accessible.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	04189023

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 [X] J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Samples taken west of levee indicate contaminants present.

01 [X] K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*
Same as above

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Same as above. Area is in 10-year floodplain. People seen fishing.

01 [X] M. UNSTABLE CONTAINMENT OF WASTES *(Spills/Runoff/Standing liquids, Leaking drums)* — 02 [X] OBSERVED (DATE: 12/10/90) — ☐ POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
Spills from tanks have occurred. Unlined berms prevalent.

01 [X] N. DAMAGE TO OFFSITE PROPERTY — 02 [X] OBSERVED (DATE: 1988) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
A spill in late 1980's spilled onto private property, damaging grass.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 [X] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 [X] OBSERVED (DATE: 1976) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Clark Oil cited for illegal dumpsite west of levee.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION *(Cite specific references, e. g., state files, sample analysis, reports)*
Illinois EPA / Bureau of Land files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	041889023

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
[X] A. NPDES	IL0001244	—	—	
[ ] B. UIC				
[X] C. AIR	11905DAPP			
[ ] D. RCRA				
[ ] E. RCRA INTERIM STATUS				
[ ] F. SPCC PLAN				
[ ] G. STATE (Specify)				
[ ] H. LOCAL (Specify)				
[ ] I. OTHER (Specify)				
[ ] J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
[X] A. SURFACE IMPOUNDMENT	unknown	
[X] B. PILES	unknown	
[ ] C. DRUMS, ABOVE GROUND		
[X] D. TANK, ABOVE GROUND	unknown	
[ ] E. TANK, BELOW GROUND		
[ ] F. LANDFILL		
[ ] G. LANDFARM		
[X] H. OPEN DUMP	unknown	
[ ] I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
[ ] A. INCENERATION
[ ] B. UNDERGROUND INJECTION
[ ] C. CHEMICAL/PHYSICAL
[X] D. BIOLOGICAL
[ ] E. WASTE OIL PROCESSING
[ ] F. SOLVENT RECOVERY
[ ] G. OTHER RECYCLING/RECOVERY
[ ] H. OTHER (Specify)

05 OTHER
[X] A. BUILDINGS ON SITE

06 AREA OF SITE
2200 (Acres)
TOTAL

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

[ ] A. ADEQUATE, SECURE [ ] B. MODERATE [X] C. INADEQUATE, POOR [ ] D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Berms surrounding loaded bottom tanks, Tank 10-2, Stormwater detention pond, all are unlined.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: [ ] YES [X] NO

02 COMMENTS

Operations area is fenced + guarded, however, area west of levee is accessible.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

IEPA / Bureau of Land files.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	041889023

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL
COMMUNITY	A. ☒	B. ☒
NON-COMMUNITY	C. ☒	D. ☒

02 STATUS	ENDANGERED	AFFECTED	MONITORED
	A. ☐	B. ☐	C. ☐
	D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE
A. 17 (mi) Surface H2O intake
B. ≃ 1 (mi) Public use

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER _____

03 DISTANCE TO NEAREST DRINKING WATER WELL ≃ 1 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
≃ (ft)	Unknown	~200 (ft)	Unknown (gpd)	☒ YES ☐ NO

09 DESCRIPTION OF WELLS (including useage, depth, and location relative to population and buildings)

Hartford - #4 - 1,900 pop.
Bethalto - #7 - 22,783
E. Alton - - 7096
Roxana #3 - 3873
Wood River - #5 - 12,446
Private - 9169 pop.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS	☐ YES ☐ NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Mississippi River	☐	☒ 1/4 mi (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. _____ NO. OF PERSONS	B. _____ NO. OF PERSONS	C. _____ NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION
☒ 1/2 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE _____

04 DISTANCE TO NEAREST OFF-SITE BUILDING
200' (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Onsite - 0
0 - 1/4 mile - 0
1/4 - 1/2 mi - 40
1/2 - 1 mi - 3817
1 - 2 mi - 10398
2 - 3 mi - 10359
3 - 4 mi - 13817

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: 041889023

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☒ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
200 (ft)	unknown (ft)	—	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
3 (in)	(in)	— %	—	— %

09 FLOOD POTENTIAL
SITE IS IN 30 YEAR FLOODPLAIN

10
☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE wetlands located on-site OTHER
A. — (mi) B. — (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
— (mi)
ENDANGERED SPECIES: —

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. — (mi)	B. ~~400 ft (mi)~~	C. — (mi)	D. ~~1/4~~ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is located in an area of oil refineries (to the north, east & south) and is bordered by a residential area to the west. Agricultural land is also located to the south.

Area west of levee - located west of populations, topography is flat - in floodplain & wetlands area.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Illinois EPA / Bureau of Land files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	04188403

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	5	IEPA Labs - Spfld & Champaign	—
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL / Sediment	12	IEPA Labs - Spfld & Champaign	—
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Water	pH, conductivity, temperature

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF IEPA - Land
(Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS IEPA - Land

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA/Bureau of Land files

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	041889023

II. CURRENT OWNER(S)

Field	Value
01 NAME	Clark Oil & Refining Corp
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	Hawthorne Street
04 SIC CODE	
05 CITY	Hartford
06 STATE	IL.
07 ZIP CODE	

Field	Value
01 NAME	
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

Field	Value
01 NAME	
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

Field	Value
01 NAME	
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

PARENT COMPANY (If applicable)

Field	Value
08 NAME	
09 D+B NUMBER	
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	
11 SIC CODE	
12 CITY	
13 STATE	
14 ZIP CODE	

Field	Value
08 NAME	
09 D+B NUMBER	
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	
11 SIC CODE	
12 CITY	
13 STATE	
14 ZIP CODE	

Field	Value
08 NAME	
09 D+B NUMBER	
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	
11 SIC CODE	
12 CITY	
13 STATE	
14 ZIP CODE	

Field	Value
08 NAME	
09 D+B NUMBER	
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	
11 SIC CODE	
12 CITY	
13 STATE	
14 ZIP CODE	

III. PREVIOUS OWNER(S) (List most recent first)

Field	Value
01 NAME	APEX
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

Field	Value
01 NAME	Clark Oil
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	Same as above
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

Field	Value
01 NAME	Sinclair Oil Corp.
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

IV. REALTY OWNER(S) (If applicable; list most recent first)

Field	Value
01 NAME	
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

Field	Value
01 NAME	
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

Field	Value
01 NAME	
02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	
04 SIC CODE	
05 CITY	
06 STATE	
07 ZIP CODE	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA / Bureau of Landfills

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. CURRENT OPERATOR *(Provide if different from owner)*

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY *(If applicable)*

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) *(List most recent first; provide only if different from owner)*

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES *(If applicable)*

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: 0411884023

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☒ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Tank 10-2

01 ☒ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☒ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Tank 10-2

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	041889023

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Clark Oil	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Hawthorne Street	

05 CITY	06 STATE	07 ZIP CODE
Dartford	IL	62048

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA/ Bureau of Landfills

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: 041889023

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: NA

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: NA

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: NA

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: NA

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: NA

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: NA

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: NA

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: NA

01 ☒ Z. AREA EVACUATED — 02 DATE 12/91 — 03 AGENCY _____
04 DESCRIPTION: Air release -

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: fences & gate

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION:

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION:

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA Bureau of Land files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

White Copy - Ill. Dept. of Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 61[illegible] STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

1/67

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
   Curb material _____. Buried Slab: Yes_____No_____
   b. Driven X. Drive Pipe Diam. 2 in. Depth 65 ft.
   c. Drilled _____. Finished in Drift _____. In Rock _____.
   Tubular _____. Gravel Packed _____.
   d. Grout:

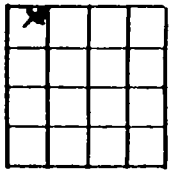
(KIND)	FROM (Ft.)	TO (Ft.)
CLAY	0	29

2. Distance to Nearest:
   Building 30 Ft. Seepage Tile Field 85
   Cess Pool — Sewer (non Cast iron) ABS 60
   Privy — Sewer (Cast iron) — 60
   Septic Tank 75 Barnyard —
   Leaching Pit — Manure Pile —
3. Is water from this well to be used for human consumption?
   Yes X No_____
4. Date well completed 12-24-79
5. Permanent Pump Installed? Yes X No_____
   Manufacturer BURKS 7HNAD Type D.W. JET
   Capacity 15 gpm. Depth of setting 58 ft.
6. Well Top Sealed? Yes X No_____
7. Pitless Adaptor Installed? Yes_____ No X
8. Well Disinfected? Yes X No_____
9. Water Sample Submitted? Yes_____ No X

REMARKS: PUMP INSTALLED ABOVE GROUND IN SMALL PUMP HOUSE.

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. 91522 Year 1979
11. Property owner JAMES J. BIENEMANN Well No. 1
    Address RR#1 BOX 629AA EAST ALTON, ILL 62024
    Driller JAMES J. BIENEMANN License No. 102-124
12. Water from SAND Formation 13. County MADISON
    at depth 29 to 65 ft.
14. Screen: Diam. 2 in.
    Length: 5 ft. Slot 10
    Sec. 12.7h
    Twp. 4N
    Rng. 9W
    Elev. 440



SHOW LOCATION IN SECTION PLAT
1425 190'W.
NE/C NW NW.

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
2	SCH 40 A-53 GALV	0	60
2	SS SUPER W.M. 10 SLOT	60	65

16. Size Hole below casing: — in.
17. Static level 29.5 ft. below casing top which is .5 ft. above ground level. Pumping level — ft. when pumping at — gpm for — hours.

18. FORMATIONS PASSED THROUCH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL 10 FT	10 FT	10'
SAND - FINE - MEDIUM	55'	65'
CLAY BAND APROX 23 FT		
TEST PUMPED APROX.		
2 HRS @ 35+ GPM		
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED James J. Bienemann DATE 1-4-80

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam. 16 in. Depth 102 ft.
   Curb material _____. Buried Slab: Yes_____ No_____
   b. Driven _____. Drive Pipe Diam. _____ in. Depth _____ ft.
   c. Drilled x. Finished in Drift x. In Rock _____.
   Tubular _____. Gravel Packed _____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
bentonite &		
natural	grade	81

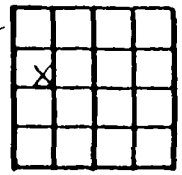
2. Distance to Nearest:
   Building ok Ft. Seepage Tile Field ok
   Cess Pool ok Sewer (non Cast iron) ok
   Privy ok Sewer (Cast iron) ok
   Septic Tank ok Barnyard ok
   Leaching Pit ok Manure Pile ok
3. Well furnishes water for human consumption? Yes____ No x
4. Date well completed August 25, 1987
5. Permanent Pump Installed? Yes____ Date _____ No x
   Manufacturer _____ Type _____ Location _____
   Capacity _____ gpm. Depth of Setting _____ Ft.
6. Well Top Sealed? Yes x No_____ Type PVC cap
7. Pitless Adapter Installed? Yes_____ No_____
   Manufacturer _____ Model Number _____
   How attached to casing? _____
8. Well Disinfected? Yes x No _____
9. Pump and Equipment Disinfected? Yes_____ No _____
10. Pressure Tank Size_____ gal. Type _____
    Location _____
11. Water Sample Submitted? Yes_____ No x

REMARKS:

Co # 25050

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Fred & Pam Heepke Well No. _____
    Address RR # 1, Edwardsville, Il.
    Driller Clarence Kohmen License No. 102-30
11. Permit No. 134354 Date August 13, 1987
12. Water from Gray Sand & Gravel (Formation) 13. County Madison
    at depth 18 to 108 ft. Sec. 12.7e
14. Screen: Diam. 16 in. Twp. 4 N
    Length: 21 ft. Slot 1st 11 ft. #40 last 10 ft. #50 Rge. 9 W
    Elev. x



SHOW LOCATION IN SECTION PLAT
150'SL, 150'EL SW NW. Irrigation x

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
16"	PVC sch 40	0 + 1	81
16"	Stainless Steel screen	81	102

16. Size Hole below casing: _____ in.
17. Static level _____ ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Brown Clay	1	1
Brown Sand	1	2
Brown Clay	4	6
Black Sandy Clay	6	12
Brown Sandy Clay	6	18
Brown Sand & Gravel Course to fine w/ small sheets		
of gray clay	15	33
Brown Sand & Gravel clean fine to course	10	43
Gray Clay & Fine Gray Sand Dirty	6	49 cont. on back→

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Clarence Kohmen CB DATE 12-1-87

IDPH 4.065

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DR IS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ___. Bored L. Hole Diam. 30 in. Depth 29 ft.
   Curb material ___. Buried Slab: Yes ___ No ___
   b. Driven ___. Drive Pipe Diam. ___ in. Depth ___ ft.
   c. Drilled ___. Finished in Drift ___. In Rock ___.
   Tubular ___. Gravel Packed L.
   d. Grout:

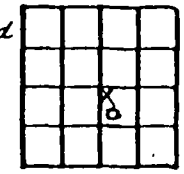
(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 50+ Ft. — Seepage Tile Field ___
   Cess Pool ___ — Sewer (non Cast iron) ___
   Privy ___ — Sewer (Cast iron) ___
   Septic Tank 100+ — Barnyard ___
   Leaching Pit ___ — Manure Pile ___
3. Well furnishes water for human consumption? Yes L No ___
4. Date well completed ___
5. Permanent Pump Installed? Yes ___ Date ___ No L
   Manufacturer ___ Type ___ Location ___
   Capacity ___ gpm. Depth of Setting ___ Ft.
6. Well Top Sealed? Yes L No ___ Type ___
7. Pitless Adapter Installed? Yes ___ No L
   Manufacturer ___ Model Number ___
   How attached to casing? ___
8. Well Disinfected? Yes L No ___
9. Pump and Equipment Disinfected? Yes ___ No ___
10. Pressure Tank Size ___ gal. Type ___
    Location ___
11. Water Sample Submitted? Yes ___ No L

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Fred Vogel Well No. ___
    Address Edwardsville ILL
    Driller Gary E. Nall License No. 92-623
11. Permit No. 14214 Date ___
12. Water from clay (Formation) 13. County Madison
    at depth ___ to ___ ft.
14. Screen: Diam. ___ in.
    Length: ___ ft. Slot ___
    Sec. 14 4d
    Twp. 4N
    Rge. 9W
    Elev. ___



SHOW LOCATION IN SECTION PLAT
NW NW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
30	Concrete	30	

16. Size Hole below casing: ___ in.
17. Static level ___ ft. below casing top which is ___ ft. above ground level. Pumping level ___ ft. when pumping at ___ gpm for ___ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
clay	29	

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Gary E. Nall DATE 5-22-84

IDPH 4.
1/74 – 3-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
   Curb material____. Buried Slab: Yes____No____
   b. Driven ✓. Drive Pipe Diam. 2 in. Depth 40 ft.
   c. Drilled____. Finished in Drift____. In Rock____.
   Tubular____. Gravel Packed____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Puddled Clay	ground surface	Casing
	0	10 FT

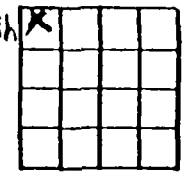
2. Distance to Nearest:
   Building 50 Ft. Seepage Tile Field____
   Cess Pool____ Sewer (non Cast iron)____
   Privy____ Sewer (Cast iron)____
   Septic Tank____ Barnyard 50
   Leaching Pit____ Manure Pile____
3. Is water from this well to be used for human consumption?
   Yes____ No ✓
4. Date well completed 3-9-70
5. Permanent Pump Installed? Yes ✓ No____
   Manufacturer Red Jacket Mfg Co Type Hand force Pump
   Capacity____gpm. Depth of setting____ft.
6. Well Top Sealed? Yes ✓ No____
7. Pitless Adaptor Installed? Yes____ No ✓
8. Well Disinfected? Yes ✓ No____
9. Water Sample Submitted? Yes____ No ✓

REMARKS:

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Arthur East Well No.____
    Address Warren Iowa South Roxana, Ill
    Driller James J. Bienemann License No. 92-152
11. Permit No. AE 07441 Date ~~3-11~~ 11-14-69
12. Water from Sand (Formation)
    at depth 19 to 40 ft.
13. County Madison
    Sec. 12, 8h
    Twp. 4N
    Rge. 9W
    Elev.____
14. Screen: Diam. 2 in.
    Length: 5 ft. Slot 10



SHOW LOCATION IN SECTION PLAT

65'S 330'E NW/C

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
2" ID	New Ark. 40 S Pipe	0	40
Surface Casing			
6" ID	Casing Pipe	0	10

16. Size Hole below casing: ✓ in.
17. Static level 20 ft. below casing top which is 1 ft. above ground level. Pumping level ✓ ft. when pumping at ✓ gpm for ✓ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Sandy loam Topsoil & Subsoil	8	8
Fine to Medium Sand w/ Clay		
streaks	32	40

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED James J. Bienemann DATE 3-15-70

White Copy –
Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO [illegible]ERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ✓. Hole Diam. 30 in. Depth 26 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift ____. In Rock ____.
   Tubular ____. Gravel Packed ✓.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 25+ Ft. Seepage Tile Field ____
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 100+ Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Well furnishes water for human consumption? Yes ✓ No ____
4. Date well completed ____
5. Permanent Pump Installed? Yes ____ Date ____ No ✓
   Manufacturer ____ Type ____ Location ____
   Capacity ____ gpm. Depth of Setting ____ Ft.
6. Well Top Sealed? Yes ✓ No ____ Type ____
7. Pitless Adapter Installed? Yes ____ No ✓
   Manufacturer ____ Model Number ____
   How attached to casing? ____
8. Well Disinfected? Yes ✓ No ____
9. Pump and Equipment Disinfected? Yes ____ No ____
10. Pressure Tank Size ____ gal. Type ____
    Location ____
11. Water Sample Submitted? Yes ____ No ✓

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Charles Klug Well No. ____
    Address East Alton IL
    Driller Gus Bekemeyer License No. 72-472
11. Permit No. 34939 Date ____
12. Water from Sand (Formation)
    at depth ____ to ____ ft.
13. County Madison
    Sec. 16
    Twp. 4N
    Rge. 9W
    Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

SHOW LOCATION IN SECTION PLAT
SE SE SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
30	concrete	27	

16. Size Hole below casing: ____ in.
17. Static level ____ ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
clay	16	16
Sand	10	26

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Mary E. Tull DATE 3-3-76

IDPH 4.01
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
   Curb material _____. Buried Slab: Yes____No____
   b. Driven __X__. Drive Pipe Diam. __X__ In. Depth ____ft.
   c. Drilled _____. Finished in Drift_____. In Rock _____.
   Tubular _____. Gravel Packed _____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 30 Ft. Seepage Tile Field OK
   Cess Pool ok Sewer (non Cast iron) ok
   Privy ok Sewer (Cast iron) ok
   Septic Tank OK Barnyard OK
   Leaching Pit OK Manure Pile OK
3. Well furnishes water for human consumption? Yes x No____
4. Date well completed Nov. 13, 1980
5. Permanent Pump Installed? Yes X Date _____ No____
   Manufacturer Webtrol Type Sub. Location well
   Capacity 15 gpm. Depth of Setting 40' Ft.
6. Well Top Sealed? Yes x No____ Type _____
7. Pitless Adapter Installed? Yes X No____
   Manufacturer Monitor Model Number Snappy
   How attached to casing? Clamp
8. Well Disinfected? Yes____ No X
9. Pump and Equipment Disinfected? Yes____ No X
10. Pressure Tank Size 2 gal. Type _____
    Location to be installed by the customer
11. Water Sample Submitted? Yes____ No x

REMARKS:

IDPH 4.065
1/74 – KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Charles N. Stavely Well No. # 1
    Address R. R. # 1, Box # 659, East Alton, Ill.
    Driller Earl C. Baker Jr. License No. 92-62
11. Permit No. 97253 Date 11-7-80
12. Water from Sand Formation 13. County Madison
    at depth 90.2' to 93.7' ft. Sec. 15.5 a
    14. Screen: Diam. 5.5" in. Twp. 4 N
    Length: 5.4 ft. Slot 20 Rge. 9 W
    Elev. _____

SHOW LOCATION IN SECTION PLAT
150' N. & 2500' E. of SW Cor. of Sec.

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6" I.D.	Blk. Steel Pipe	+ 1.5	
	#19, .280		
	Sch. 40		90.2'

16. Size Hole below casing: _____ in.
17. Static level 19.78 ft. below casing top which is 1.5' ft. above ground level. Pumping level 21.5' ft. when pumping at 15 gpm for 20 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	10'	10'
Dirty Sand	10'	20'
Sand (Packed with Dirty Strips)	50'	70'
Clean Sand	23.7'	93.7'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED A.L. And D.K. Baker DATE 11-13-80

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored X. Hole Diam. 36 in. Depth 40 ft.
   Curb material ____. Buried Slab: Yes ____ No X
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift X. In Rock ____.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
CONCRETE	-40	+1

2. Distance to Nearest:
   Building 60 Ft. Seepage Tile Field 150
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 150 Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes X No ____
4. Date well completed JUNE 1975
5. Permanent Pump Installed? Yes X No ____
   Manufacturer RED JACKET Type SUB
   Capacity 10 gpm. Depth of setting 38 ft.
6. Well Top Sealed? Yes X No ____
7. Pitless Adaptor Installed? Yes ____ No X
8. Well Disinfected? Yes X No ____
9. Water Sample Submitted? Yes ____ No ____

REMARKS:

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner CURT FLETCHER Well No. ____
    Address RR 3 HARTFORD ILL
    Driller HENRY L BUSH License No. 92-346
11. Permit No. 38624 Date 3-16-76
12. Water from SANDY-CLAY (Formation) 13. County MADISON
    at depth 30 to 40 ft.
    Sec. 16, 3E
    Twp. 4N
    Rge. 9W
    Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

SHOW LOCATION IN SECTION PLAT
SE NW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
36	CONCRETE	-40	+1

16. Size Hole below casing: ____ in.
17. Static level 25 ft. below casing top which is 1 ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	1	1
BLACK CLAY	3	4
SANDY YELLOW CLAY	26	30
CLAY-SAND-GRAVEL	30	40

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Henry L Bush DATE 3-16-76

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILL

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ___. Bored X. Hole Diam. 36 in. Depth 40 ft.
   Curb material ___. Buried Slab: Yes ___ No X
   b. Driven ___. Drive Pipe Diam. ___ in. Depth ___ ft.
   c. Drilled ___. Finished in Drift X. In Rock ___.
   Tubular ___. Gravel Packed ___.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
CONCRETE	-10	GRADE

2. Distance to Nearest:
   Building 70 Ft. — Seepage Tile Field NONE
   Cess Pool NONE — Sewer (non Cast iron) NONE
   Privy NONE — Sewer (Cast iron) NONE
   Septic Tank NONE — Barnyard NONE
   Leaching Pit ___ — Manure Pile NONE
3. Well furnishes water for human consumption? Yes X No ___
4. Date well completed JUNE 1975
5. Permanent Pump Installed? Yes X Date JULY No ___
   Manufacturer RED-JACK Type SUBM Location ___
   Capacity 10 gpm. Depth of Setting 38 Ft.
6. Well Top Sealed? Yes X No ___ Type CAULKING
7. Pitless Adapter Installed? Yes ___ No X
   Manufacturer ___ Model Number ___
   How attached to casing? ___
8. Well Disinfected? Yes X No ___
9. Pump and Equipment Disinfected? Yes X No ___
10. Pressure Tank Size 2 gal. Type HYDROFLO
    Location BURIED
11. Water Sample Submitted? Yes ___ No X

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner WILLIAM MORTLAND Well No. ___
    Address HARTFORD ILL
    Driller HENRY BUSH License No. 92-376
11. Permit No. 38641 Date 3-22-76
12. Water from SAND (Formation) at depth 34 to 36 ft.
13. County MADISON
    Sec. 16, 20
    Twp. 4N
    Rge. 9W
    Elev. ___
14. Screen: Diam. ___ in. Length: ___ ft. Slot ___

SHOW LOCATION IN SECTION PLAT
SE NW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
36	CONCRETE	-40	+1

16. Size Hole below casing: ___ in.
17. Static level 22 ft. below casing top which is 1 ft. above ground level. Pumping level ___ ft. when pumping at ___ gpm for ___ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	3	3
YELLOW CLAY	8	11
BLUE DRIFT	23	34
BLUE SAND	2	36
DRIFT	4	40

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Henry L Bush DATE 3-22-76

IDPH 4.065
1/74 KNB-1

APPENDIX H

HARTFORD PWS ANALYSIS